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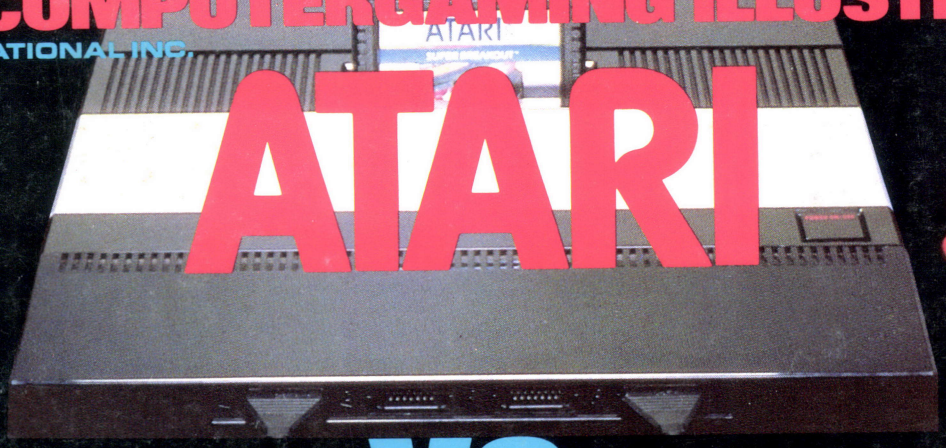

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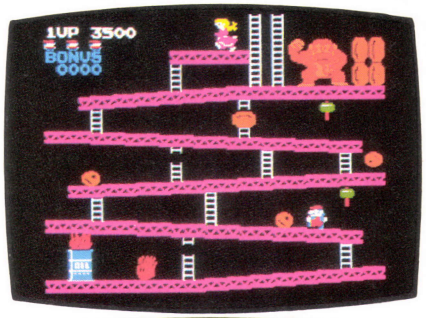

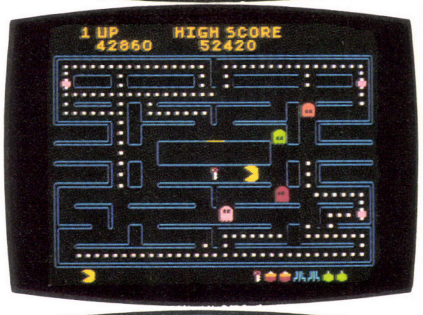

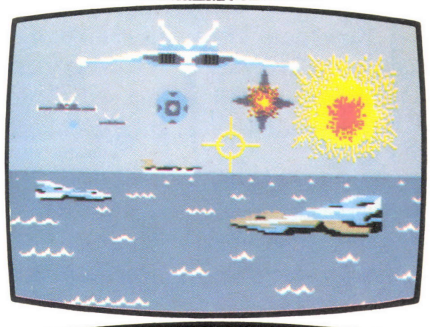

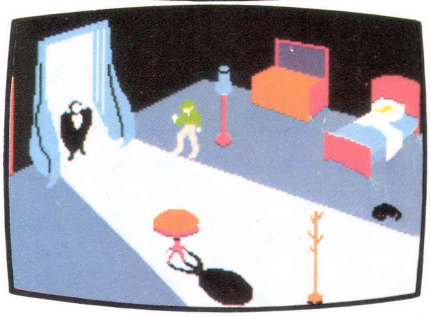

Contents

The Keyboard	*6*
Eye On	*7*
Behind the Scenes: Atari vs. Coleco	*11*
Supergaming	*14*
Fiction: Neighbors 1999	*15*
Focus On: Sturm und Drang	*19*
Conquering: Frankenstein's Monster	*26*
Conquering: Galaxian	*28*
Close Up: The Incredible Expanding Machine	*30*
Preview	*34*
Arcadia: Raiders of the Lost Arcade	*42*
Conquering: Popeye	*44*
Conquering: Millipede	*46*
Print Out	*49*
Input	*50*
Media Preview	*52*
Computereyes: Fun and Games and Future-Think	*54*
RAMblings	*57*
Championship Videogaming	*64*
Video Victor	*80*
You Read It Here First	*82*

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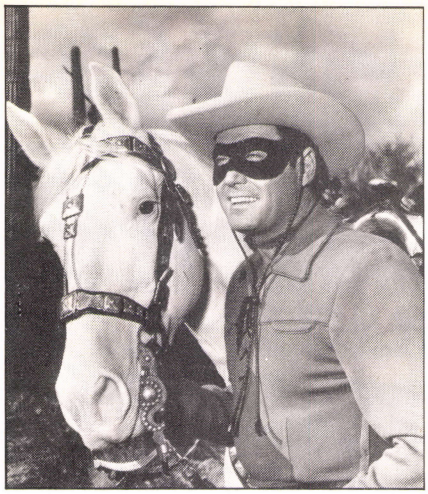


The keyboard

Guest Editorials

When I started doing *The Lone Ranger* television series in 1949, it was a great thrill for me. I'd starred in movie serials for years, pictures such as *Perils of Nyoka* and *The Ghost of Zorro,* in which I played heroes masked and unmasked. Those characters were always fighting for justice, fairplay, and honesty, qualities which have been present in *all* the roles I've played.

But above all, I'd always admired the Lone Ranger. Perhaps more than any other character in history, his symbols — the mask, the silver bullet, the white hat — stand for virtue. Thus, when I finished shooting *The Lone Ranger* in 1956, I decided that those attributes could best be served if I wore the white hat and made personal appearances for the rest of my life.

I've never done anything else, nor could I have asked for a more rewarding vocation. I make nearly one hundred appearances every year, and that has allowed me to carry that message to four generations of young people.

Four generations. A lot has changed in that time. When I first started in television, the only other western was *Hopalong Cassidy,* and those shows were feature-length pictures cut to fit the TV format. *The Lone Ranger* was the first western ever photographed *expressly* for TV. And our popularity helped sell televisions: the number of sets which had been sold by 1949 was less than four million. By the time *The Lone Ranger* went into syndication, that number exceeded fifty million.

Now those TVs are used for more than broadcast entertainment. Today we're also using them to play videogames, and there's nothing wrong with that. Videogames are good for the country, very entertaining, and good for the economy; they're also fun for kids.

As long as kids don't neglect their education; as long as they respect their parents and don't break the law, I don't think videogames will hurt anyone. I believe these problems are overstated; I meet the youth of America in city after city, and they're as great as ever.

One day, I'm sure we'll have a Lone Ranger videogame. Until then, I offer the following observation: videogames show us how fairplay and integrity are important, for you'll never win the game unless you play by the rules. The kids of today may be more interested in Pac-Man than in the G-men which were popular when I was making movies. But I'm gratified that thirty-four years after I first brought the Lone Ranger to television, the values for which he stands are more vital than ever.

Clayton Moore

I've been playing with computers longer than most. I had onboard computers in *Robinson Crusoe on Mars,* having learned in an episode of TV's *The Outer Limits* that you can't survive on the Red Planet without them.

Then, of course, I was up to my cowl in computers as television's Batman. We had an Interdigital Batsorter, Chemo-Electric Secret Writing Detector, an Intergalactic Recorder, and other forward-looking implements.

In 1966, when the series began its three season run, all of that was science fiction.

Computers were playthings of the researchers at MIT, and satellite dishes were strictly for communicating with those brave pioneers in Gemini and Apollo spacecraft. The only "cable" I ever thought about was the one which carried telephone impulses to and from Europe (and now *that* has been replaced by far more efficient satellites.)

Videogames? In the sixties, that meant *To Tell the Truth* and *What's My Line?*

Today, a lot of the apparatus we had in *Batman* — dressed, of course, in less imposing names — is fact. And we're lucky this is so.

My present-day fascination with videogames does not derive from personal affection. I prefer working out and skiing to playing videogames. But that's a personal preference, not a value judgment. I happen to think that videogames are an ideal means to help broaden the imaginations of young people.

Take the character of Batman. Our show still draws heavy ratings whenever it's shown, and I'm pleased that today's relatively sophisticated audiences enjoy the unique meld of action and humor we had in every episode. Yet, I'd like to see a videogame which features Batman as he was conceived back in 1939: a shadowy creature of the night.

Once again I, personally, would rather play that part than play the game, but for all the people who *don't* have that option, videogames are a great way to experience the thrill and challenge of being such an extraordinary figure.

Needless to say, adventure characters should be just one facet of videogaming. In the same way a painting allows us to gaze upon the faces and souls of people from another age, or a book permits us to linger on the thoughts of great figures from history and fiction, videogames can expand our awareness of the world as it is, was, or might be.

The medium is still in its infancy, but read this again in a few years and see if this prediction hasn't come true: as videogaming grows, *we* will grow.

Adam West

CARTRIDGE POTPOURRI

Spring must be a difficult season for the videogame manufacturers. Mother Nature and young peoples' hearts are in full bloom, and people of all ages will seek their leisure time in the fragrant, fresh outdoors.

We wouldn't have it any other way. But there *will* be rainy days, and night will inevitably fall. For those times, there is a veritable shower of new titles for the major videogame systems.

Atari 5200.

Atari's own games for this sytem include:

Space Dungeon. Explore the thirty-six chambers and find the treasure.

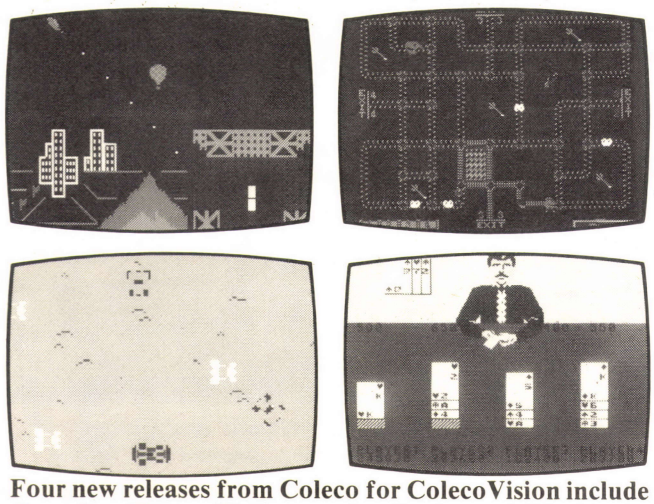
Pole Position. Grand Prix style racing competition, an adaptation of the arcade game.

Kangaroo. A baby roo has been kidnapped by mad monkeys and is caged at the top of the screen. The player controls Mother Kangaroo, who must bound obstacles, dodge flying apples and duke it out with the monkeys to rescue her baby.

Parker Brothers will be releasing five of their games for the 5200, if not by June then shortly thereafter. These include the familiar *Popeye, Q*BERT* and *Frogger,* and:

Super Cobra. The player navigates a helicopter through cavern-like mazes while fighting off enemy missiles in a search for treasure.

Tutankham. Evil spirits are brought to life when you enter the forbidden tomb. Armed with a laser, you can fight off the spirits ... but can you find your way out?



Four new releases from Coleco for ColecoVision include *Looping, Pepper II, Destruction Derby,* and *Blackjack.*

ColecoVision

A number of the abovementioned Parker Brothers titles will be available in ColecoVision in spring and summer with the rest to follow shortly thereafter.

From Coleco for spring and early summer:

Looping. Loop, climb and dive through a hail of rising air balloons in your attempt to open flight terminal gates. Once the gates are open, you must fly through an enemy-ridden maze.

Pepper II. The player rushes through a maze zipping rooms shut and avoiding vicious Roaming Eyes and a Zipper Ripper.

Gorf. Battle the fleets of the evil Gorf, which include Astro-Invaders, Galaxians, robot ships and the ultimate test: the flagship.

Destruction Derby. For use with the *Turbo* driving module, the object here is to slam and disable as many cars as possible in a frantic auto scramble.

Blackjack/Poker. For one to four players. Smoke-filled room not included.

Intellivision

In our last issue we outlined the thirteen cartridges from Mattel for the Intellivision system that will be released over the course of the year.

One of those games, *Shark! Shark!,* received accolades from our reviewers, Jim Clark and E.C. Meade. More are reviewed in this issue's *Preview* section.

In addition, Coleco will be adapting a number of their games to Intellivision. These games will be familiar to regular readers of these pages as well as anyone who has set foot in an arcade in the last year.

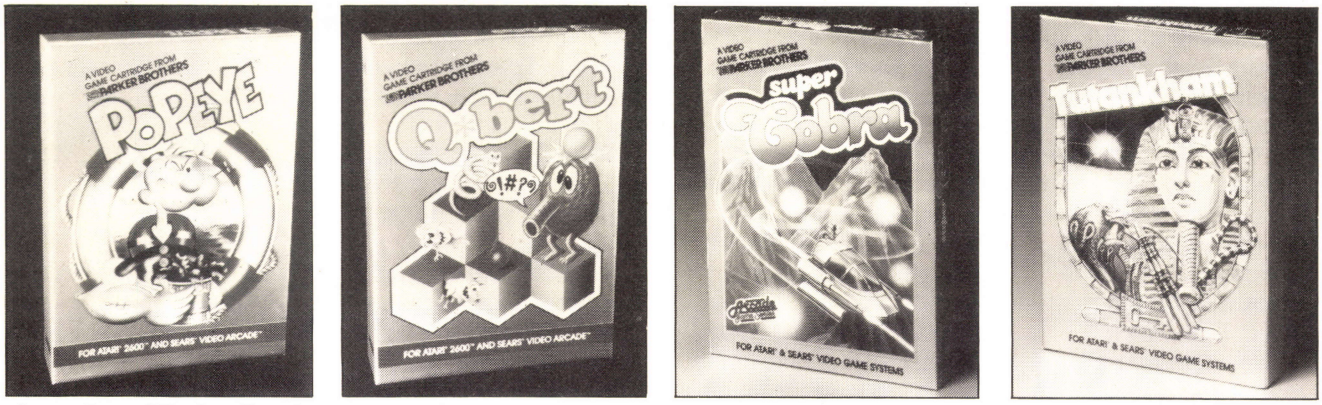
The titles are: *Zaxxon, Smurf Rescue in Gargamel's Castle, Donkey Kong Junior* (Mario a villain?), *Turbo* (drive, he said) and *Ladybug* (a dark horse favorite among many maze game fans).

Atari 2600

The 2600 owner is faced once again with a happy dilemma: the problem is not in finding a good game but in choosing one from a wealth of titles.

For spring and early summer, Coleco will be offering *Smurf Rescue, Looping,* and *Donkey Kong Junior* (described above) for the 2600.

At the same time, Atari will be releasing *Kangaroo*



A number of Parker Brothers games, shown above in their 2600 versions, will soon be available for the Atari 5200 and ColecoVision. We pray that not one precious* Q*BERT *sound effect is lost in the translation.

and one other:

Jungle Hunt. Familiar to arcade-goers, this game offers the player the opportunity to save a kidnapped woman from savages by swinging on vines over grasping gorillas, swimming through shark infested waters, and weathering an avalanche.

Fox Games has three entries for this quarter:

The Earth Dies Screaming, an attention-getting title if ever there was one. The player has a radar screen and a gunsight to aid him/her in battling the Trillians.

Spacemaster X-7. Avoid paying a toll and, while you're at it, destroy the Hyperion's base.

Bank Heist. If avoiding an intergalactic toll is too small-time for you, then round up the boys, examine the city map, and go for the big dough while avoiding the cops.

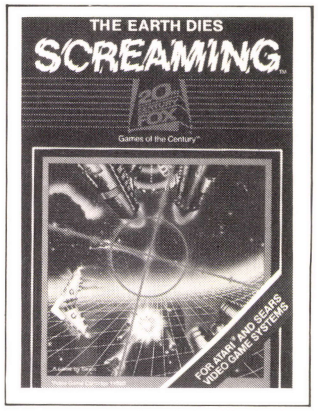
And here are smaller companies with big plans for the 2600 in spring and summer.

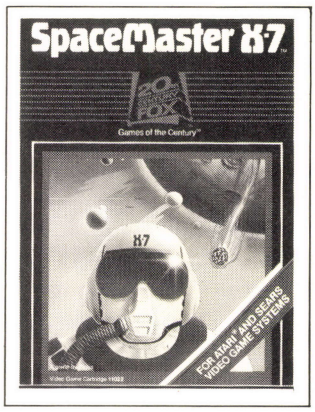
Stronghold and *Rush Hour* from Commavid. The first is a space game with deadly aliens and whirling force fields. The second game invites the player to indulge his/her fantasies in smashing and dodging through a traffic jam.

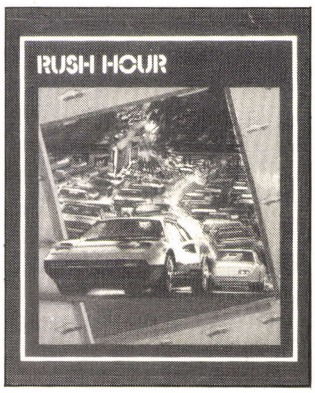
Kamikaze Saucer from Syncro. Blast those scout saucers lest they report back to the Kamikaze Squadron. If that happens, you're up the cosmic creek.

Demolition Herby from Telesys. The object is to outline thirty squares on a scrolling screen before Herby is destroyed by crash cars or lack of fuel.

Two players can play *Herby* simultaneously: one as Herby and the other controlling the crash cars.







Four new games from Fox Games and Commavid delineate madness and warfare, present and future.

A BETTER MOUSETRAP

With all the talk about the Atari 2600 (in this issue and previous ones), its twin brother, the **Sears Video Arcade,** has been sorely neglected.

But now, in the "anything you can do I can do better" spirit, Sears is building a better mousetrap. In their fall of '83 "Wish Book," Sears unveiled a new version of the Atari 2600, a unit to be sold only at Sears.

The **Sears Video Arcade II** offers features not found in the 2600 or Sears' first unit. These include an all-in-one joystick and paddle control, with both right and left handed fire buttons; pushbutton control switches; LED displays; a cord-wrap pedestal for easy storage; and finally, the controllers plug into the front rather than the back of the unit.

The new console is sold with the *Space Invaders* cartridge and lists for $189.99.

Sears also sells four games that cannot be found anywhere else. The first game is *Arcade Golf,* which Atari used to sell as *Miniature Golf.* Atari no longer offers that game. The other games are:

Submarine Commander, an underwater *Star Master.* You control a sub on a search and destroy mission. You monitor radar, sonar and your fuel allotment.

Stellar Track is, more or less, similar to *Submarine Commander,* set in outer space.

Steeple Chase. One to four players control horses that run from left to right while leaping hurdles. The game pace increases as the lead horse progresses across the screen.

THIS STICK FIGURES

Owners of the newly-designed Sears controllers may miss out on this one: The Triggerstick.

The Triggerstick slips directly over Atari and compatible joysticks and is twisted into position. No assembly and no new wires are involved. The Triggerstick puts the fire button on the top of the stick, where many players prefer it.

The stick was designed by Rich Koch, president of the Koch company of Irvine, California. "The joysticks I saw (at the Consumer Electronics Show in Chicago) were all too expensive for the average videogame player," says Koch. And so he developed one anyone can afford. Two Triggersticks sell for $9.95.

The Triggerstick slips over existing Atari and compatible joysticks for top fire.

WELCOME BACK, BULLWINKLE

You've shelled out ten bucks for your new top-button joystick, and you're delighted with it. You've come home after a nerve-racking day at work and you're eager to burn a few brain calories by blasting some *Commie Mutants.*

Gripping your joystick firmly, you discover that ... you can't ... let go. Your prized stick is smeared with peanut butter, jelly, and substances you can't identify.

Your kids borrowed your favorite toy.

This scenario will not be uncommon in American homes as the videogame companies crank up to vie for the sometimes rapt, sometimes fickle attention of children.

And there's more at a stake here than 1983-4 dollars, as Martin Levitan notes in this issue's *Computereyes* column. The kids of today are the consumers of tomorrow. Since computers figure heavily in the lives of our future citizens, 'product identification' is the name of the game.

But enough cynicism. What we're talking about here is Bullwinkle J. Moose, the Cookie Monster, and yabba dabba doo.

Mattel is releasing five games designed for children ages four to nine, compatible with the **Atari 2600,** in the summer and fall. The release dates for these games in the **Intellivision** format have not been disclosed.

The games are:

Scooby Doo. The lovable mutt is pursued by ghosts.

The Flintstones. The Stone Age family during a typically crazy day.

Masters of the Universe. He-Man takes on all comers.

Through interaction, games in the Atari Kids' Library and Fun Club are meant to be fun and educational.

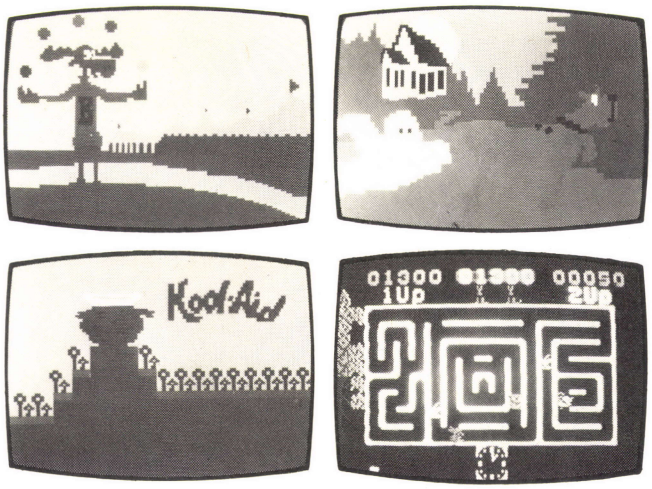
Rocky and Bullwinkle. Help the duo foil a train robbery attempt by Boris and Natasha.

Kool-Aid. Help the pitcher man fight off the thirstees.

Among other characters that have been signed in an agreement between Hanna-Barbera's parent company and Mattel are: The Jetsons, Quick Draw McGraw, Hong Kong Phooey and Huckleberry Hound.

Atari's own contributions to the field of children's videogaming can be divided into two groups: the Atari Kids' Library and the Atari Fun Club.

The selections for the Kids' Library, for ages three to seven, have been designed to entertain as well as stimulate the child's counting, matching, musical, directional, and letter-recognition sensibilities. Each game has multiple skill levels; the game will continue to appeal to children at both ends of the age spectrum.



***Shown above are the Intellivision versions of Mattel's games for children scheduled for the Atari 2600 and, later, for Intellivision. Top left is* Bullwinkle, *then* Scooby Doo, Kool-Aid, *and* Masters of the Universe.**

A Kids' Controller has been designed to appeal specifically to this age group. The five by seven-inch controller contains a twelve button keypad. An overlay that comes with each game slips over the keypad; colorful pictures on the overlay represent objects or directions corresponding to the game. The list price for the controller is $14.95.

The first four Kids' Library games are *Sesame Street* games: *Alpha Beam, Big Bird's Egg Catch, Oscar's Trash Race,* and *Cookie Monster Munch.*

The Kids' Controller has easy-touch keypads.

The games are scheduled to be released in the summer and are designed for the **2600.** Further games will be targeted for the **5200.**

Also for the 2600, and later for the 5200, are the Atari Fun Club games, for ages seven to eleven.

Also educational and interactive, the Fun Club games will features such Disney characters as Mickey Mouse, Donald Duck, Dumbo, Goofy, and Snow White. The Disney games will be released in the summer.

Later in the year, titles for the Fun Club will feature Snoopy and the Red Baron, Charlie Brown, Kermit the Frog and last, but *certainement* not least ... Miss Piggy.

GOING UP

A relative newcomer to the videogame field is, in the Reagan parlance, hitting the ground running. If the products from Amiga of Santa Clara, California are as good as they sound, Amiga could be around for a while.

Their Power Module is designed to enhance the memory capability of the **VCS.** The Power Module has its own microprocessor which interacts with the one in the VCS, and six K bytes of RAM. As with Starpath's Supercharger, games are contained in audio cassettes and programmed with any audio recorder.

The first two games for the Power Module are *Depth Charge* and *3-D Ghost Attack.* A special programming procedure allows for true 3-D effects. Glasses are included with the game. The Power Module lists for $44.95; cassettes are $9.95.

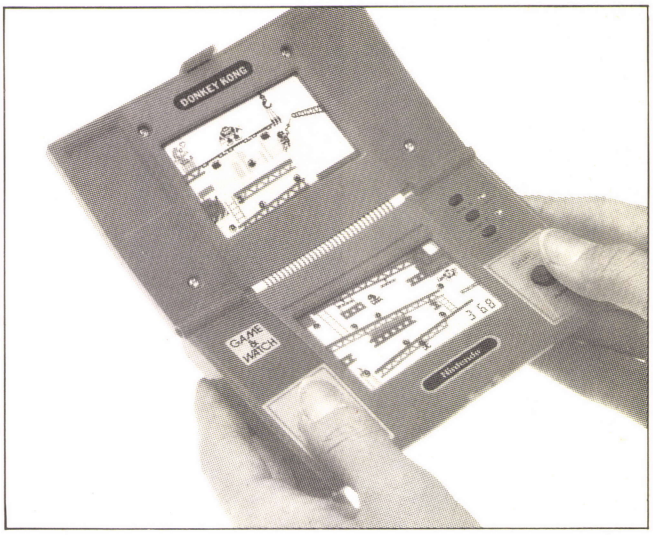
Projects in development at Amiga include a small hand controller to replace the conventional joystick and a skiing videogame in which the player stands and controls gameplay with footpads.

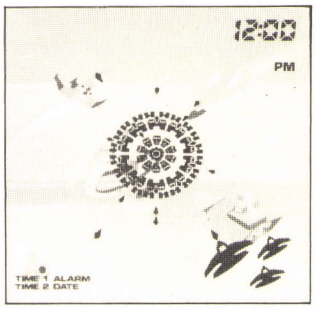
We'll be watching.

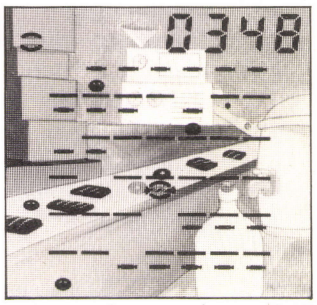
GOING DOWN

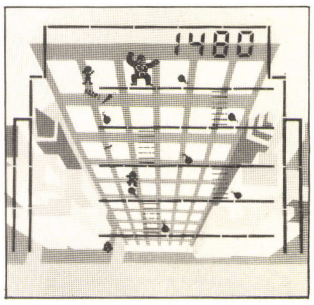
A spokesman at Quaker Oats, the parent company of U.S. Games, would neither confirm nor deny rumors that U.S. Games was going out of business. "There have been staff layoffs," he said. "The business is going through changes, but any announcement as to what the outcome will be, won't be for a couple of weeks."

Likewise, spokesmen for Data Age refused to officially confirm that the software company was going out of business.

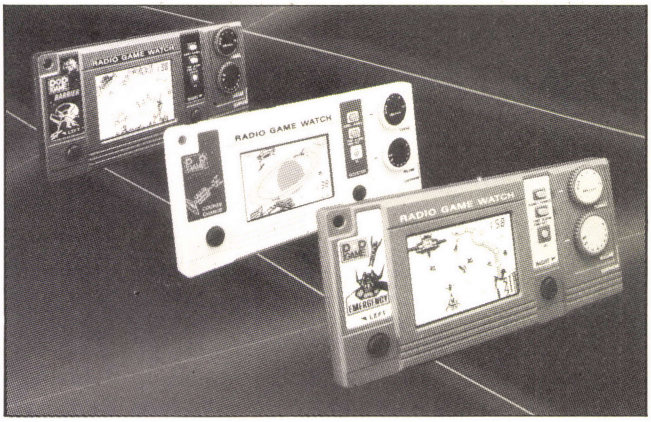


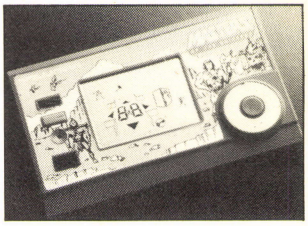


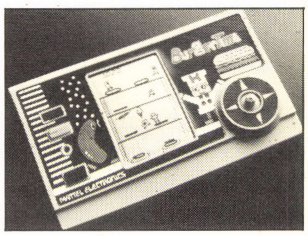




Above: four screens of Tiger Toys' new Deluxe Hand Arcade Games. Top to bottom, left to right: **Space Invaders, Star Castle, Jawbreaker, King Kong.**







Left: Nintendo's **Donkey Kong** *Game includes a time function. Above: Mattel's line of handhelds, in addition to* **Burger Time** *and* **Masters of the Universe,** *include* **Dungeons and Dragons** *and, in the future,* **Football** *and* **Armor Attack.**

HAND HELDS & PORTABLES

In previous pages we have extolled the glories of spring and, with tongue in cheek, mapped the horrors that await parents who share their toys with children.

Shown here are simple and inexpensive toys that a child or teen can call his/her own, that won't tie up the television, and, with summer just around the bend, will serve as a beeping pacifier on that long vacation drive.

Left: Technotel's Pop Games include a radio, and time, alarm and stopwatch functions. Right: Coleco's Home Arcade Games include **Zaxxon & Ms. Pac-Man.**

ATARI vs. COLECO

Clash of the Titans ... in Court.

by Stephen Bent

An Olympian struggle between the leviathans of videogaming, Atari and Coleco, erupted into a dazzling display of legal pyrotechnics in an Illinois district court recently. The fireworks illuminated, if only temporarily, the life-and-death contest for market dominance between Atari, the industry giant, and an ever-increasing number of contentious, smaller rivals.

The battle's opening salvo was fired by Atari late last year with the filing in Chicago of a $370 million suit against Coleco for the alleged infringement of two Atari patents and sundry acts of unfair competition by Coleco. In its complaint, Atari took dead aim at Coleco's ballyhooed "Expansion Module #1" and "Gemini" videogame base unit. According to Atari, Coleco's expansion module, which permits ColecoVision users to play game cartridges made for the Atari VCS system, is nothing more or less than a copy of Atari's VCS base unit.

Specifically, Atari claimed that the designs for both the Expansion Module #1 and the Gemini unit tracked the descriptions for making and using inventions contained in two U.S. patents issued in 1978 and 1982, respectively, to Steven Mayer and Ronald Milner, and now owned by Atari. The 1976 Mayer/Milner patent, entitled "Method and Apparatus for Generating Moving Objects On a Video Display Screen," details programmable, microprocessor-driven logic circuitry for the TV display of multiple objects, the movement of which could be controlled via a joystick. The second Atari patent describes a digital device to replace analog noise sources for producing all those beeps, explosions, gongs, and other sound effects so close to the heart of every electronic games aficionado.

In essence, Atari's complaint stated that Coleco, rather than coming up with its own circuitry, had ripped off the designs from Atari's patents, an action which, if proven, could render Coleco a "willful infringer" in the eyes of the law and, as such, potentially liable for *treble* the damages to Atari by virtue of Coleco's infringement. Needless to say, that could have amounted to a tidy chunk of change for Coleco, who might also have been ordered to cease manufacture and sale of the infringing devices, namely, the Expansion Module #1 and the Gemini unit.

But there was more.

On top of its infringement claim, Atari also alleged violations by Coleco of both federal and Illinois state law in the deceptive use of certain Atari circuitry and trademarks for promoting the new Coleco hardware. According to Atari, Coleco exhibited what was labeled an "Expansion Module #1" at toy fairs in Montreal, New York City, and Chicago in early and mid-1982 without telling anyone that (using Atari's word) "not even a prototype of 'Expansion Module #1' then existed." Atari urged, moreover, that the "bogus" expansion module, the display of which had prompted numerous orders, was in reality Atari VCS circuitry remounted in a different plastic hous-

ing. That, said Atari sternly, constituted the sale of Atari's hardware as Coleco's own with an intent to confuse buyers ("reverse passing off" in lawyers' parlance), and a violation of both federal and state laws forbidding false designations of origin and related deceptive trade practices.

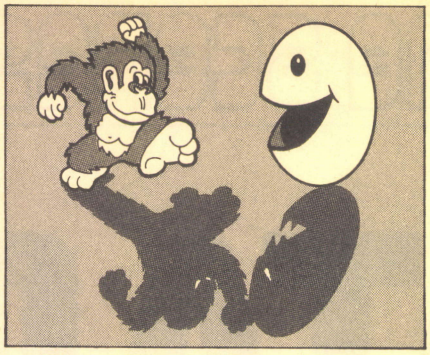
In the same vein, Atari asserted that Coleco had effectively misused Atari trademarks like *Asteroids* and *Pac-Man* by giving them "undue prominence" in Coleco's television commercials, so as to confuse the consuming public as to Atari's sponsorship or approval of the Expansion Module #1. Atari also pointed to Coleco's use in its ColecoVision advertising copy of Atari trademarks with the appended statement "Trademarks used under license from designated owners," a clear implication (clear to the folks at Atari, anyway) that Atari had OK'd the copy when, in fact, it had not.

Another instance of out and out trade deception, shrieked Atari!

Apparently cut to the quick, the wounded colossus let fly a final volley, just for good measure, alleging that Coleco had injured "both Atari and the consuming public," contravening state law, by advertising and selling the Expansion Module #1 and other Coleco hardware without the prior approval of the Federal Communications Commission. Such approval is required for the marketing of "radio-frequency devices."

This being the final Atari allegation, their attack subsided. But the battle was joined almost immediately, and in deadly earnest.

Coleco answered Atari's complaint, point for point, denying (as lawyers are fond of saying) "each and every allegation," including infringement of the Mayer/Milner patents, but with some rather interesting qualifications. Coleco admitted, for example, that it had indeed displayed a "simulation" of the Expansion Module #1 at the toy fairs identified by Atari, and that, "consistent with well-known and accepted trade practice, the simulation contained some components from [an Atari] VCS unit which had been lawfully acquired" by Coleco. Apparently, then, Coleco *had* used Atari circuits in *some* kind of device which, while bearing the title "Expansion Module #1," was something other than a complete module. Coleco insisted, however, that "no one who viewed the



simulation was confused or deceived by it."

As Coleco told it, any purported *faux pas* in Coleco's marketing approach paled before Atari's nefarious schemes to (in Coleco's words) "monopolize trade and commerce in the programmable home video game market and the hardware and software submarkets" in violation of U.S. antitrust law. Waxing poetic, Coleco also lamented Atari's attempt "to drown fledgling competitors in an ocean of litigation, trumping up baseless charges against Activision, Imagic and others."

The specific charges contained in the massive Coleco counter-claim are so numerous as to defy concise summary. Coleco's basic story, however, went something like this: Atari has embarked on a plot to exclude all effective competition from the home videogame market by abusing its patents and "leveraging" its ascendant market position, particularly in the software submarket, to dominate the hardware submarket and otherwise to make entry into the market prohibitively expensive for Atari's competitors. More specifically, Coleco accused Atari of amassing a veritable "portfolio of invalid and improperly procured patents," including the two Mayer/Milner patents Atari said were infringed by Coleco's new hardware. "Invalid," according to Coleco, because the inventions covered by the patents did not qualify for protection under the statutory provisions governing the issuance of patents.

For example, Coleco contended that the basic Atari patent describing the logic circuitry for generating manually controllable TV game graphics was, in essence, placed on sale more than a year prior to Atari's filing for the patent (a legal no-no) by virtue of Atari's marketing numerous popular videogames, including *Pong, Pursuit, Breakout,* and *Night Driver.* What's more, Coleco proclaimed, Atari was aware of this, and also knew that its circuits were technically obvious in light of existing knowledge, yet had deliberately withheld this information from the U.S. Patent and Trademark Office in order to "improperly procure" the patent.

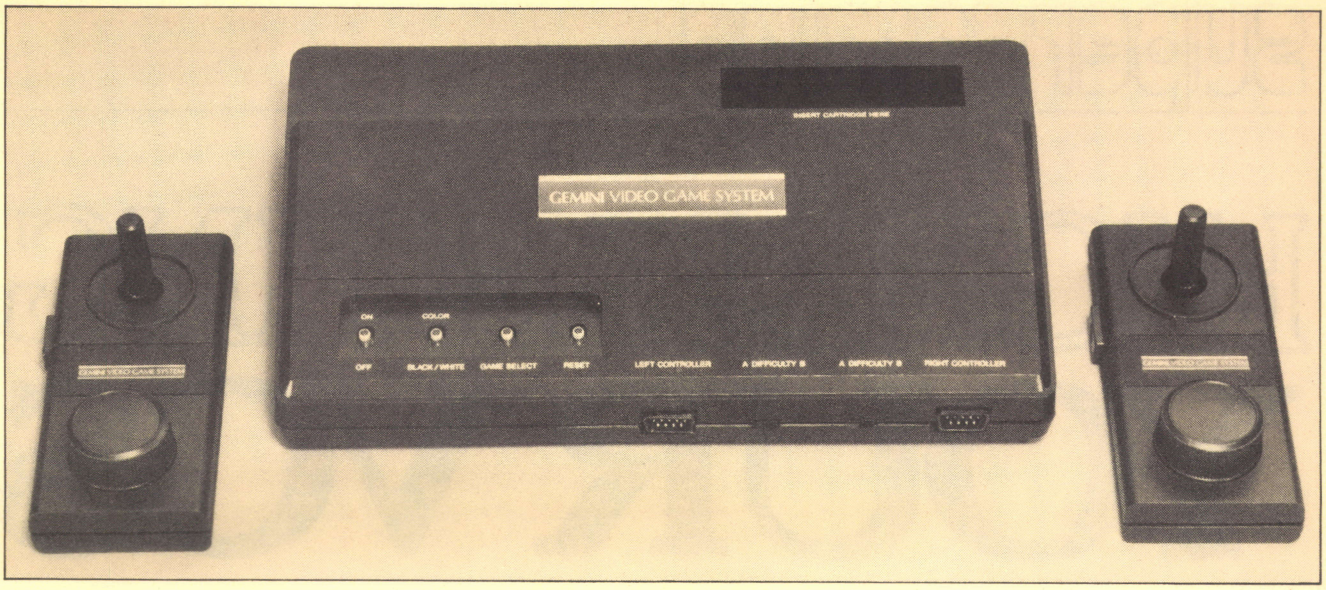
This "fraud on the Patent Office" (more legalese) lay at the heart of Coleco's declaration that Atari's patents were, at the very least, unenforceable and that Atari continued to misuse its patents to snuff out competition.

And still there was more.

Besides fraudulently obtaining its patents, Atari, Coleco claimed, had taken illegal retaliatory measures against companies (Activision and Coleco were particularly identified) seeking to "introduce or expand the concept of interchangeability into the programmable home video game market," all in futherance of Atari's "monopolistic scheme." Among the retaliatory measures enumerated by Coleco were Atari's circulating false and disparaging information about competitors and their products, threats by Atari to terminate or reduce services to distributors and large retailers carrying competing products, Atari's pressuring accounting firms to avoid doing business with would-be Atari competitors, Atari's coercing television networks to drop competitors' advertising on programs carrying Atari's own ads, Atari's intimidating potential customers of Coleco and others with lawsuits, and Atari's demanding from videogame software producers exclusive rights to future as well as existing games.

On this last point Coleco denounced Atari for allegedly acting in concert with Lucasfilms (producer of *Star Wars* and *Raiders of the Lost Ark*), with Namco (the Japanese creator of *Pac-Man, Galaxian,* and *Galaga*), and with Centuri (another games designer) to restrain the home videogame trade "unreasonably" (an antitrust buzzword) and to monopolize the market. Moreover, Coleco accused Atari of maliciously interfering with Centuri's own contractual relationship with Coleco, to the point of inducing Centuri to breach an existing agreement with Coleco.

Did I mention that Coleco also claimed that Warner Communications, Atari's parent company, violated U.S. law by buying a piece of Namco, the Japanese software designer, thereby substantially lessening competition in



Atari alleges that Coleco's Expansion Module #1 and the Gemini unit, above, are an infringement of two patents issued to Steven Mayer and Ronald Milner, two patents that have since been acquired by Atari.

the software submarket?

Don't worry if this all sounds a bit mysterious. In a way, that's what the lawyers representing the adversaries intended the complaint and counterclaim to be — the first shots in a largely subterranean economic war, opening gambits drawn grandly but with the broadest of brushstrokes, formal, not too informative, and fairly oozing with menace. Each side wanted to play as big a bluff as it could manage legally without exposing any weaknesses or wholly dissipating the element of surprise, with the ultimate goal of forcing the opposing side to the negotiating table. And, apparently, somebody succeeded.

Atari and Coleco filed a proposed settlement of all issues between them with the district court on March twenty-first and the case was formally terminated four days later.

But, you may ask, what about Atari's patents? What about Coleco's alleged infringement and its admitted use of Atari trademarks? And what about all the dirt Coleco threw on Atari — commercial disparagement, grand designs to throttle competition, and the rest?

We'll probably never know. The settlement agreement is secret, languishing in a brown envelope stamped "Confidential" in the district court's vault, away from prying eyes.

The parties, of course, are saying nothing.

What, then, does the settlement portend for Atari and Coleco and, perhaps more importantly, for the rest of the industry? Skirting gross speculation, I offer the following observations.

First, Atari seemingly got the better of whatever deal was cut with Coleco. Atari's patents remain, if not unscathed, then presumptively valid and enforceable, and Atari has, by bringing the action, demonstrated its resolve to go to court to protect its patented inventions. While Coleco continues to advertise its Expansion Module #1 using Atari trademarks, it may no longer be doing so for free. More importantly, even if Coleco did not concede the validity of Atari's patents, it is now (according to a recent *New York Times* notice) paying for the freedom from being sued under those patents. You just have to admire Atari's post-settlement position: having jettisoned a costly lawsuit, the videogaming giant would be only too happy to receive, in return, royalty payments tied to the sales of Coleco's new hardware while simultaneously enjoying the increased demand for Atari software that ColecoVision owners using the expansion module will generate.

Coleco, on the other hand, had lost in its bid to have its counterclaim heard in conjunction with Atari's action. Instead, the district court judge ruled in February that Atari's infringement claim would be decided separately and, in all likelihood, first. Had Coleco lost the ensuing first round of litigation, it might well have had then to ante up, or convince the judge to hold his decision on damages and remedies in abeyance, until the merits of Coleco's counterclaim were weighed in a subsequent proceeding. Coleco faced the prospect of significant and long-term disruption of its commercial operations pending a second, lengthy trial, with no guarantee that its position concerning Atari's "anticompetitive" behavior would be finally vindicated. Against such a scenario, a negotiated settlement that left Coleco's marketing strategy for the Expansion Module #1 and Gemini unit substantially intact would seem all the more attractive.

The impact of the settlement on the industry as a whole is very difficult to predict, especially without knowing the details of the secret agreement. Depending on the precise terms of the settlement, Coleco may be able again to challenge the validity, scope, and enforceability of the Mayer/Milner patents in some future dispute, say, over royalty payments. One thing is certain, however — the settlement will not insulate Atari from further legal hassles arising from the company's efforts to keep the lion's share of the videogame market.

Just a few weeks ago, Atari successfully avoided an injunction sought against it in Virginia district court by Parker Brothers. Parker Brothers had complained that Atari was offering exclusive contracts to twenty six of Parker Brothers' largest wholesale distributors, provided they stop dealing in the software of Atari's competitors, including Parker Brothers.

Sound familiar?

The name of the game is *Market Share,* and the game *will* continue.

HIGHLIGHTING YOUR VCS

Prolong the life of your Atari with a light-emitting diode.

By Bob Guerra

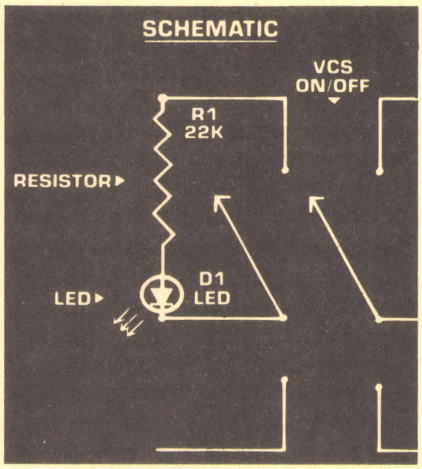
Whether you own a table-top version of *Pac-Man,* or one of the newest, "third wave" home videogame systems, you're probably familiar with transformers. A transformer is the little (or in the case of ColecoVision, *big*) black box which, when plugged into a wall outlet, converts one hundred fifteen VAC to smaller amounts of current such as six or nine volts DC.

If you own such a device, you probably also know that most manufacturers recommend unplugging the transformer when the game is not in use. This prevents the transformer from overheating and ultimately insures a long life for your entire system.

Unfortunately, systems such as the Atari VCS do not come equipped with an indicator light to remind you that the console is still plugged in. This situation is easily remedied, however, with the installation of a light-emitting diode (LED). These are the step-by-step instructions which will help you to perform this modification on an Atari VCS.

Here are the materials you will need:

1. Two one-foot sections of insulated wire, ie #22 or thinner.
2. A high brightness LED, (catalogue number 276-033, type TLR-107 from Radio Shack will do the trick nicely at a cost of two for eighty-nine cents).



3. One 22K ¼ watt resistor.
4. A soldering iron.
5. Rosin core solder.
6. An electric drill.
7. A small Phillips head screwdriver.

Begin by removing the six recessed Phillips head screws from the bottom of the VCS. *Important: do not remove the two exposed screws in the center of the base.*

Once the top panel is removed, you will notice that the on/off switch sits above six metal posts (three on each side) which attach it to the circuit board. In order to install the LED, you must solder the two sections of wire onto two of the six posts, specifically, the left center, and left top. Be sure to strip about one quarter inch of insulation off of the ends of both wires.

Next, splice the free end of the wire you've soldered to the top left post, to one of the resistor leads. After soldering this connection, splice and solder the remaining resistor lead to the anode terminal of the LED. This is the lead extending out of the side, rather than the center, of the LED.

Finally, splice and solder the free end of the remaining section of wire to the cathode or central lead of the LED. You're now ready to mount the LED somewhere on the top panel of the VCS.

Choose a spot where the LED will be highly visible, and where there'll be room for the resistor and leads below. Once a location has been selected, drill a small hole into the panel, being careful not to crack the plastic. The hole should be large enough to allow the top of the LED to be pushed through, but should catch on the lip at the base of the LED. A drop of plastic cement on the lip of the LED should hold it in place. Replace the top panel and you're ready for action.

While you're busily destroying aliens, the LED will remain unlit. When you shut the unit off, however, it will light, reminding you to unplug your transformer before celebrating your victory over the invading aliens. The LED may even remain lit for a short time afterwards due to residual electricity in the capacitors of the VCS.

Enjoy the project and good luck!

NEIGHBORS: 1999

The vengeance-bent cuckold's best weapon is his home computer.

by Tim Moriarty

On Thursday last, I left work early and I did not call home first. This fundamental error was to be the first step in my reformation.

Once home, I found my ministress and my ex-best friend in *delicto flagrante* on the holopad of my enviroom floor. Alex's hologram was all over Jeannie like a thrashing candy glaze.

At the time, I confess, I thought that the sight of two otherwise-naked adults in lobehelmets was ludicrous.

So first I laughed ... and then, enraged, I stamped forward. I reached through Alex's holo, grasped Jeannie's hand, and, with a swift yank, directed it to punch my ex-best friend in the groin. Those lobehelmets do wonders. He howled.

Startled out of their sinful reverie, they looked up at me in horror. "Doyle!" Jeannie cried.

I ignored her and addressed Alex. "I know what a libertine you are, Alex. But I assumed that your friend's ministress would be an exception."

"Doyle, listen. I--". His voice was tinny over the holopad mike.

"You'll pay, Alex. You know me. I'm not one to forgive or forget." I flipped the admittance switch and Alex's ridiculous naked image vanished.

Jeannie gathered a robe to herself, gazing up at me fearfully. My temper is renowned.

"You're in breach of contract, lady." I ripped the lobehelmet from her head. She yelped as the nodes were rudely detached from her scalp.

I was preparing to smash the offensive object against the wall when she cried out, "Don't, love! It's not a rental!"

"You bought this?" I said. She nodded. "Against my

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wishes?" Eyes shut, she nodded.

The Happy Humphrey Helmet, on the market for a mere eighteen months, had become an American commonplace. We alone, among our acquaintances, had resisted buying a set. I had assumed that my home was safe.

The helmet held in place four nodes which attached to the skull. The nodes sent sub-electronic impulses to precisely localized areas of the brain, stimulating predetermined brain cells. Particular settings stimulated dance or mimetic skills, but of course the most popular was the Venus mode, which bestowed control and directed the wearer to rhythms and contortions that would bring a blush to a shimmy queen. When used in concert with another helmet-wearer, the results were said to be unearthly.

To further deepen my shame — and boost my electric bill — Alex and Jeannie had plugged their helmets into the holo-enhancer. Threadwire was everywhere, the turn-of-the-century status symbol.

When the lobehelmet was wired into the hologram receiver/rangefinder, the wearer had the sensation of embracing flesh and of being embraced ... all realized via brain cell stimulation.

"You make me sick, Jeannie," I sneered.

"I was so lonely," she sobbed. "You and I--. We--."

"We have a contract!" I screamed. I rushed out of the room, to fume in private.

Jeannie and I had renewed our contract three times already. We loved each other. I cared for her too much to mete out her punishment without reflection.

But a plan by which I might crucify Alex was already stewing in my old-fashioned, unenhanced brain.

When a person of my executive stripe wants to commit a crime, he must go outside. No visiphone or computer transaction is completely free of Uniputer scrutiny.

Thus, I ventured out of my condoplex, out of the suburbo tubes, out into the cold, crowded, filmy, loud, garish and diseased out-of-doors.

I started with a visit to my bookie. He obliged me with some information. I then worked my way, rung by rung, down the social ladder until I was introduced, for a fee, to Roach.

Roach was a highly regarded Uniputer renegade. His bristly moustache and slouch cap did nothing to conceal a network of zits, flakes, and veins that covered his ruddy face. His ill-lit shop was an appalling shambles.

"What is it you want?" asked Roach.

"Unblockable access to, and active interception of, this man's home computer system," I replied as I handed him a paper with Alex's name and address in Los Angeles.

I found Roach's manner brusque yet aggressive. He questioned me about my hardware and as much as I knew of Alex's. I told him all I could.

Roach fell silent. He scratched his chin. Flakes fell. He swiveled to his computer terminal and began to type. To my surprise, he played the keyboard like a concert pianist. He swayed like one too, though I suspected he was on drugs.

The symbols on the screen were meaningless to me. He turned to face me, scratching. "Us bein' in Jersey and him bein' in L.A. ... and him havin' that new Dodorite squelch ... not t'mention the judges comin' down so hard lately ... figure with inflation ... "

"Just give me the short version," I snapped. Grime was beginning to form on my suit.

Roach peered at me. "I can give you six minutes. Four minutes monitor and two active, but the two active interference minutes got to be spread out to no more'n forty seconds at a pop, otherwise you get a lit'gable trace. Cost'cha two thousand bucks."

I exulted. It was more performance and less expense than I had anticipated.

While Roach fashioned adjustments on my chip, I went out and obtained the cash from a nearby machine and hired a thug to guard me back to Roach's shop.

An hour later, I left with a lengthy program, a chip wrapped in brown paper, and instructions for its installation.

All through the evening I entered the program and installed the chip. Now and again, Jeannie rapped on my locked study door. "Doyle," she mewed. "Doyle, I want to apologize. Please let me in. We must talk."

I did not speak to her. I willed my meditations through the door: we will talk, my sweet, when I am done settling the score. By then I will have neutralized my hatred for Alex, and you and I can go on as before, with a regretful but decided depression in our trust factor.

"Doyle? Please."

At six a.m., I completed the program. The chip was firmly in place. Alex's home and its electronic schema appeared on my screen, blueprint fashion.

I amused myself that morning by lowering the temperature in his apartment to forty degrees and turning his bathwater brown through cross-balancing his dyes.

I then used up thirty more seconds of my active two minutes listening to his angry phone calls to Uniputer maintenance. I had succeeded. Roach's device worked to perfection.

But it was not enough, clearly. Anonymous revenge is a tepid dish indeed.

That evening, I intermittently monitored Alex's home until I found him in. By carefully scrutinizing his energy use I deduced that he had company. The coordination of his sound, kitchen, and enviroscent systems told me it was female company.

Female company.

I waited two hours. Again monitoring, I saw that the scent and light systems were on in the bedroom, and that his slush bed was warming.

It was simple, really. I forced open his bedroom wallscreen and patched my own image through by way of the visiphone. My leering face appeared, towering over the bed, the image of my eyes as large as basketballs.

Alerted by the change of light, they lurched up from the roiling slush bed, he and his chartreuse-haired honey, and gaped at my colossal image. She gathered slush to cover her breasts.

"Alex!" I chirped. "Long time no nothing."

"Oh no," he moaned, slumping back into bed and covering his face with his hands.

"Don't let me stop you two," I offered. "Do continue. Please." I turned my basketball-sized eyes on the woman. "I've had the privilege of watching Alex before ... in my very own home!"

Alex was up and flicking his wallscreen dials. "Turn it off, Doyle," he warned. "Turn it off or I'll call the Uni-police!"

I leaned into my visiphone monitor. My eyes, to them, must have been the size of card tables. "You won't do that, Alex."

He shook his fist at me, stomping and snuffling like a bull. "Look at you, Doyle! You're sick! Why do you think Jeannie needed some gentle, even sane, company? You're mad!"

I tried to keep the sting out of my eyes. I explained to the woman, "Jeannie is my ministress." I paused. "Who are *you* betraying?"

My timing was that of a well-oiled vaudevillian. I blinked out after a pensive beat.

Five minutes later, Alex called me. His face in the visiphone screen was empurpled with rage. "You have every reason to be angry with me," he said, "but what you're doing is criminal, Doyle, excessive. Now if you harass me one more time, I'll go to the Uniputer police, I mean it."

"Do that. Let them fight your battles for you, pal."

His cheeks twitched, but when he spoke, his tones were measured. "You're really out of touch, Doyle. You think you're a big shot with your puny interference chip, don't you? Well, if it's a battle you want ... "

"Uh, Alex, wait — "

He hung up on me.

Just to show him that I wasn't afraid of him, first thing the next morning I ordered, and had delivered to his home, six cases of pseudosalmon, a food I knew him to detest. The bill, and that ghastly paté, were all his.

For that evening, I had pencilled in *'reconciliation with Jeannie.'* But the requisite peace and quiet were not to be ours. A string of salesmen and preachers called unbidden, my smoke and burglar alarms went off with nerve-jangling regularity, and our auto-oven burnt our dinner to a brick.

I had my suspicions, of course. But I threw caution and common sense to the winds and crawled gratefully into my massage coat, hoping to calm my shattered nerves.

I'd forgotten that I was at war.

I put the massage coat control on the pansy setting, a very light vibration and pressure probe. As the coat began to knead my muscles from neck to toe, I relaxed. I officially forgave Jeannie. I considered giving Alex another chance. I was even beginning to admit that I was not entirely blameless ... when suddenly the meter zoomed up to the baker setting, a punishing, pounding mode that only athletes and masochists can withstand.

Frantically I tried to wriggle out of the coat as it pulled and pummelled me. I flailed and scratched at the off switch, but it did not work.

Responding to my screams, Jeannie helped pull me out of the demonically vibrating coat. With her help, I staggered to the shower, my teeth clacking, my eyes goggling, my legs shuddering beneath me. The shower began to bring me back. It began to relax me the way the vibro-coat was supposed to —

Too late I saw it coming. Alex scalded me.

I leaped screaming from the shower, slipped, and conked my head on the linoleum.

I woke in Jeannie's arms. "What's going on around here, Doyle?" she asked with more suspicion than sympathy. Duly noted.

"Alex! It was Alex!"

"What are you raving about? There's no one here."

"Just so. Jeannie, I'll level with you. I bought an illegal interference chip from a man named Roach downtown." I told her the whole story. Everything, up to Alex's most recent retaliation. I concluded with a stirring denouncement of Alex, of Jeannie, and of Uniputer law. "I did what any real man would," I declared fervently. "This is not my fault."

And what do you suppose her reply was? Stroking my hair as if I was a lhasa apso she said, "You overreact, darling. You're too proud, too inflexible. You're always so angry, so negative, so dismissive."

"I? Me?" She was hitting me while I was down, clearly.

"Look at you, love," she said. "You're all tied up in knots."

I pulled away from her. "Of course I am! Your boyfriend — "

"He's not my boyfriend!"

" — your lover just tried to kill me in the shower! What I did to him was just! You two made an ass of me! A dupe!"

"I was lonely," she sighed. "You go into sulks. You won't love me, won't even talk to me sometimes."

Only the blank visiphone screen was witness to our quarrel. It seemed to be watching very closely.

She made a grab for my hand. I pulled away. "I just want us to be happy now," she said.

"Happy? Happy, as in Happy Humphrey Helmets and Holo enhancers? That kind of happiness?"

She stated her creed with ever so much conviction: "Man's body is a machine. The brain is a computer. Does your computer refuse its memory multiples? Does it refu — "

"I can ruin it for you," I whispered. That stopped her cold. I continued, "It was your sin, remember. Under our contract, I have grounds to throw you out of the house. Temporarily at least, you would be out of the condoplex." I fixed her with a snake's stare. "Do you remember what it's like out there ... beyond these walls?"

She was silent. I said, "Your lungs will shrivel and blacken in a matter of months. You'll gather sores. Your eyes will burn and water and your bowels will loosen."

"I don't have to listen to this," she snapped as she headed for the door. I rushed to block her way. "Don't go," I chided. "Face me. Face the truth. You're a sinner. You're corrupt."

Her eyes leveled to meet mine. She was no longer scared, and this unnerved me.

"You're not the man I contracted with," she said. "I hardly know you when you get like this."

I feigned surprise. "You don't know me?" My voice cracked. Quickly I regained my lower register. "I'm the man you live with. You're stuck with me. And I'll never change. Tomorrow," I paused in order to capture her full attention. She seemed to be watching my nostrils. "Tomorrow ... I deliver Alex the crushing blow."

"Don't do it, Doyle," she said. This was not a plea. It was more in the nature of an order. I confess I was surprised. "Don't do it. I'm warning you."

With that, she left the apartment.

As the elevator doors slid shut between us, I called out, "Do you know something I don't know?" I was still smiling ... a painful and unnatural smile. She was gone.

She would spend the evening at a girlfriend's apartment. It had happened before. She was understandably upset. I, however, had flushed the poisons from my system and was feeling renewed.

Peace would soon be restored to my home. All that was left was to polish off Alex.

I took the morning off from work just for the occasion. Though I had slept badly, I rose eagerly and sat immediately at my computer.

I spent the morning listening in on Alex's phone calls from his home. Alex is a salesman of panel girders. In a series of four calls, I listened to him pitch his way up to the president of a well-known dome construction company, a Mister Feebs.

It sounded like a very important account for Alex, worth hundreds of thousands of dollars. This was going to be fun.

Thirty seconds into his sales pitch to the president, and with a mere forty seconds left on my active mode, I cut in. My face appeared inset into both visiphone monitor screens, and I eyed them left and right. A conference call, odd man out.

"Doyle!" Alex cried. His horror was delicious.

I ignored him and spoke to the president, "Mister Feebs, are you married?"

"Why yes. Yes, I am," he stammered. He looked to Alex. "Who is this man?"

I was preparing to make a devastating and witty remark, but Alex was quicker. "He's from our accounting division, Mister Feebs," said Alex. "If you'll please hold one minute ... " Suddenly, Feebs' image disappeared from my monitor.

"Hey! What happened?" Frantically I tried to reprogram the interference, but it was no use. Feebs did not return.

Alex stared at me levelly. "You're deranged, Doyle."

"How did you —? How could you —?"

"They don't let madmen live in the condoplexes, Doyle."

"You interfered with my interference chip!" I cried. And then the full import of Alex's last remark hit me.

He was saying, "You're going to have to learn to behave, Doyle. I'm going to teach you." His image vanished.

As I stared at the empty screen, a hot flush rose to envelop me and my brain burned: it had never occurred to me that I might be cast out. It had all been in fun, I protested silently. It had all been between friends.

Suddenly — impossibly — a television program appeared on my visiphone monitor. I recognized the show, though I hadn't seen it in years. It was channel 22E, the underclass public station for editorial reply. My fingers stabbed the cutoff switches, but the show remained.

I ran through the house in a frenzy. The show began to appear, one by one, in every screen and monitor on the premises: a dreary succession of lepers, emphysemiacs and inbreds inarticulately presenting petitions that would be ignored at every level of government. Thank God Jeannie was not home to see it.

There was not one room without a screen, bathroom included. I could not ignore it. The volume rose until the walls were throbbing. I found myself in the enviroom, screaming at Alex over the din to turn it off. Turn it off!

Abruptly, the show blinked off. All was quiet. I ventured a smile and a whimper of hope. Love thy neighbor, Alex.

Then, quite unbidden, a hologram began to form on the holopad ... life size, a man ... and, seeing it, my heart sank to squish in my slippers.

"Go away!" I ordered curtly. "Go away. No one asked for you."

The figure, glowing on the holopad, regarded me with dead eyes. "I can ruin it for you," it said.

"You can't! I'm safe!" I shouted. "Who are you? Go away!"

"You don't know me?" I did, of course. "I'm the man you live with. You're stuck with me."

It was the image of me. They must have recorded it the previous night. I hardly recognized myself. Looking closely, I realized that a case could be made for madness: the ill-fitting suit was out of style; the hair was unkempt; the restless eyes searched the air like a frog's tongue darting after flies. "I'll never change," it was saying.

I rushed to the door and pulled the knob. Locked! How did Alex manage *that?* The interior doors weren't even wired! At my back, the image chided, "Don't go. Face me. Face the truth."

"Turn it off, Alex!" I screamed, foolishly directing my pleas to the ceiling.

I ran to the hologram controls and jammed them into the 'off' position until my thumbs ached. No effect. The image sat huffily, pridefully, its glasses askew, its nostrils moist.

It leaned forward. The image penetrated me and the face was erased. "Do you remember what it's like out there?"

I retreated. " ... will shrivel and blacken ... " I rushed to the door, banged my shoulder against it. "You'll gather sores." I bashed my head against the door. No escape. "Your eyes will burn and water ... " With the hologram's voice droning and its eyes piercing my back like a laser, I fell to my knees blubbering, my hands slapping flat against the door. "You're corrupt," it was saying.

Jeannie opened the door. I spilled out of the room and fell at her ankles.

"Doyle," she said simply. Her eyes, looking down at me, were cool.

My composure was soon regained. Rising to my full height, I said to her, "You betrayed me, Jeannie. You knew he was recording last night. You helped him. Pack your bags. You're out."

"I want to stay," she said. "I want to stay with you." She nodded toward the enviroom. "Look, Doyle. Please."

I trusted her still. What choice did I have? I turned and faced the hologram taken of myself the night before.

"I bought an illegal interference chip from a man named Roach downtown," the hologram was saying. "I paid him two thousand dollars and he gave me a chip and a program that allowed me to — "

I didn't need to hear the rest. The point was made. Alex had recorded my confession to Jeannie along with the rest of the night's prattling. Holograms are admissable in court. They are projected onto a snug holopad witness stand.

"It's blackmail," I whimpered.

"Under our contract," Jeannie said, "if you're committed, I'm out as well. We don't want to lose you." Her need seemed genuine. I clung to it for dear life. "We want you to behave," was her final, gentle plea.

The hologram of me shimmered and vanished, to be replaced instantly by Alex's, a goon's grin plastered across his face. "No hard feelings, eh, neighbor?"

I insisted on wearing shoulder pads with the lobe-helmet. Jeannie admired the effect, saying that it was sure to catch on.

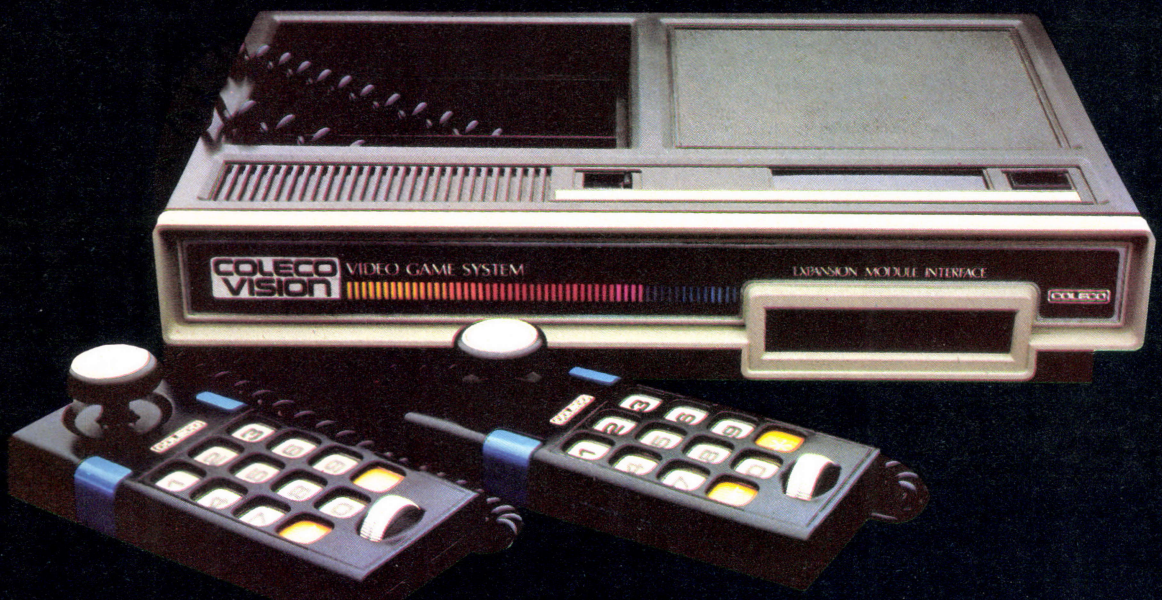
There's a new mode to be introduced into the Happy Humphrey system, one that will stimulate dormant memories. It's called 'Total Recall' and will be available to the consumer in a few months. Although it's to be primarily an instructional and law enforcement tool, they're already boasting that it will polish one's social skills.

We're on the waiting list. Now that I'm a good lover, I want to be charming company as well.

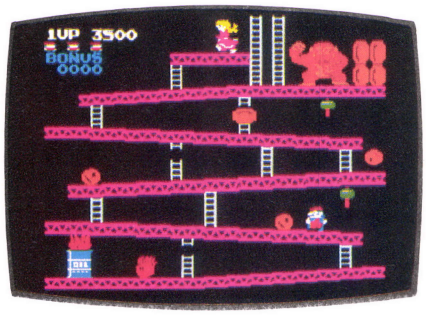
focus on

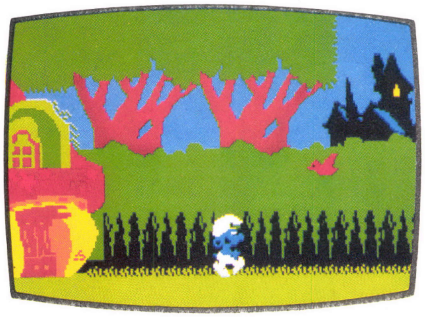
STURM UND DRANG

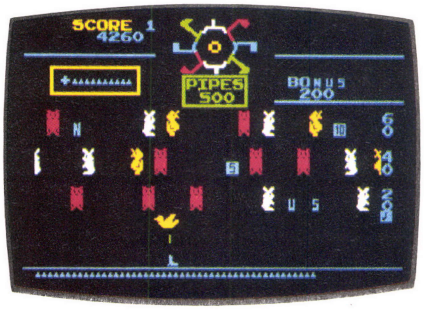
The late eighteenth century produced a wave of German literature wherein the individual was exalted, traditions were opposed, and nationalism ran high. Coleco and Atari continue that tradition.

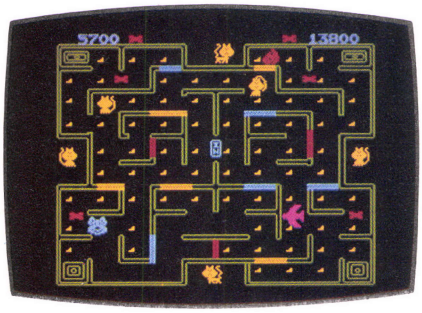


Written by E.C. Meade with contributions from Jim Clark, Martin Levitan, Dale Rupert, and Samuel Lawrence.









The crux of the showdown between Atari and Coleco is simply this: for years, Atari sold more hardware and software than any company in the videogame business. Mattel's Intellivision, NAP's Odyssey, and the other home units were always distant seconds.

Enter Coleco, which fooled detractors and doubters alike by jumping into the crowded field one year ago with ColecoVision, and instantly breathing down Intellivision's neck for the number two spot.

Aware of the high-quality graphics inherent in the sophisticated ColecoVision computer, Atari raced out their 5200 unit. Unfortunately, although the 5200s sold proportionately well, Atari couldn't get enough consoles into the marketplace to mount an effective campaign against ColecoVision.

Now that the dust of 1982 is long-settled, and the companies begin gearing up for the fall and Christmas seasons of 1983; and now that both ColecoVision and the 5200 have enough cartridges in stores to make for a fair evaluation and comparison of the two units, we're going to do just that.

But first, a word from the days of the Big Bang.

The Fate of the 2600

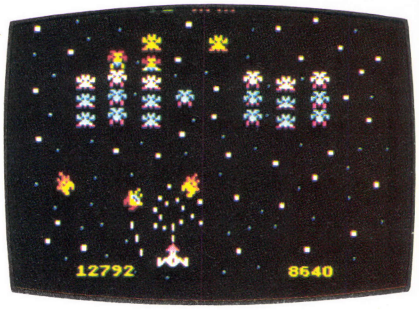
The Atari 2600 has been around virtually since the creation of the modern videogaming universe.

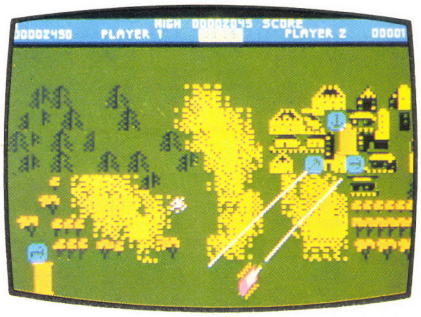
But don't confuse age with a lack of utility; neither Atari, its competitors, or consumers are about to write the old warhorse off.

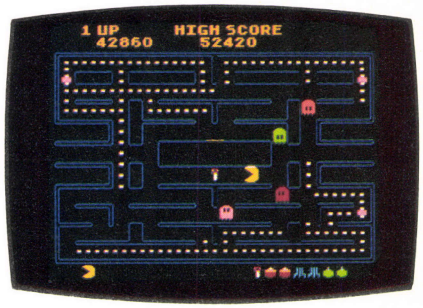
In its simplicity, the 2600 is still a great little unit. For the most part, you can just plug in cartridges and play, the goals clearly defined and the action restricted to relatively incomplex parameters, ie Pong *(Reactor, Tennis)*, slide-and-shoot *(Megamania, The Empire Strikes Back)*, run-the-maze *(Pac-Man)*, find-the-missing-pieces *(Superman, Raiders of the Lost Ark)*, and draw-a-bead *(Missile Command, StarMaster)*.

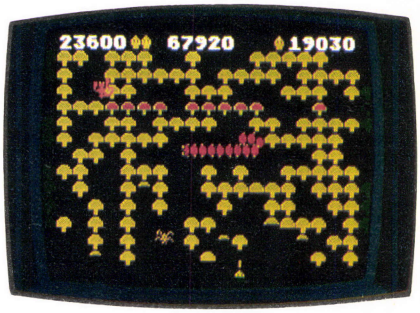
There are in excess of twelve million 2600s in homes across the nation, and neither Atari nor its competitors are going to stop manufacturing the console nor cartridges for those units in the foreseeable future. The reasons are many:

1. The 2600 remains the least expensive and most versatile way for









people to familiarize themselves with computers. Low-cost computers such as the TS1000 are ideal for financial and recordkeeping applications, but most young people are more interested in entertainment than in tax-planning. Only the 2600 allows you all the benefits of a videogame and personal computer for under two hundred dollars, giving consumers access to a vast library of games *plus* home management software and plug-in computer keyboards. As long as the fear of technology remains, and people are dubious that computers can be of any use to them, there will be a market for the 2600.

2. Atari, Activision, Imagic, M Network, et al, have an awful lot of 2600 cartridges out there. Since the manufacturing costs are minimal compared to the price of having developed the games, slapping them between two slabs of plastic is pure gravy from the game companies' point-of-view. But to reap those rewards means maintaining the availability of the 2600.

3. There are many people who already own the unit and are not going to rush out and buy a 5200 or ColecoVision as well. To suddenly turn its back on those who bought 2600s — by discontinuing the console and thereby discouraging the production of new software — will be bad for Atari's image.

It's true that, for example, 8-track audio cassettes have been discontinued, leaving many consumers with obsolete equipment. However, in that instance buyer animosity could not be focused on one manufacturer.

4. If Atari drops the 2600, it will be sacrificing that share of the hardware market, still a sizable one because of the low price of the unit. Both Coleco and Intellivision produce 2600 adaptors for their consoles and if they didn't follow suit, Atari would be losing that hard-fought and still-lucrative territory to its principal competitors. Indeed, now that Coleco has introduced the Gemini, its own version of the 2600, Atari may be obliged to mount a new and competitive campaign for its trusty old VCS.

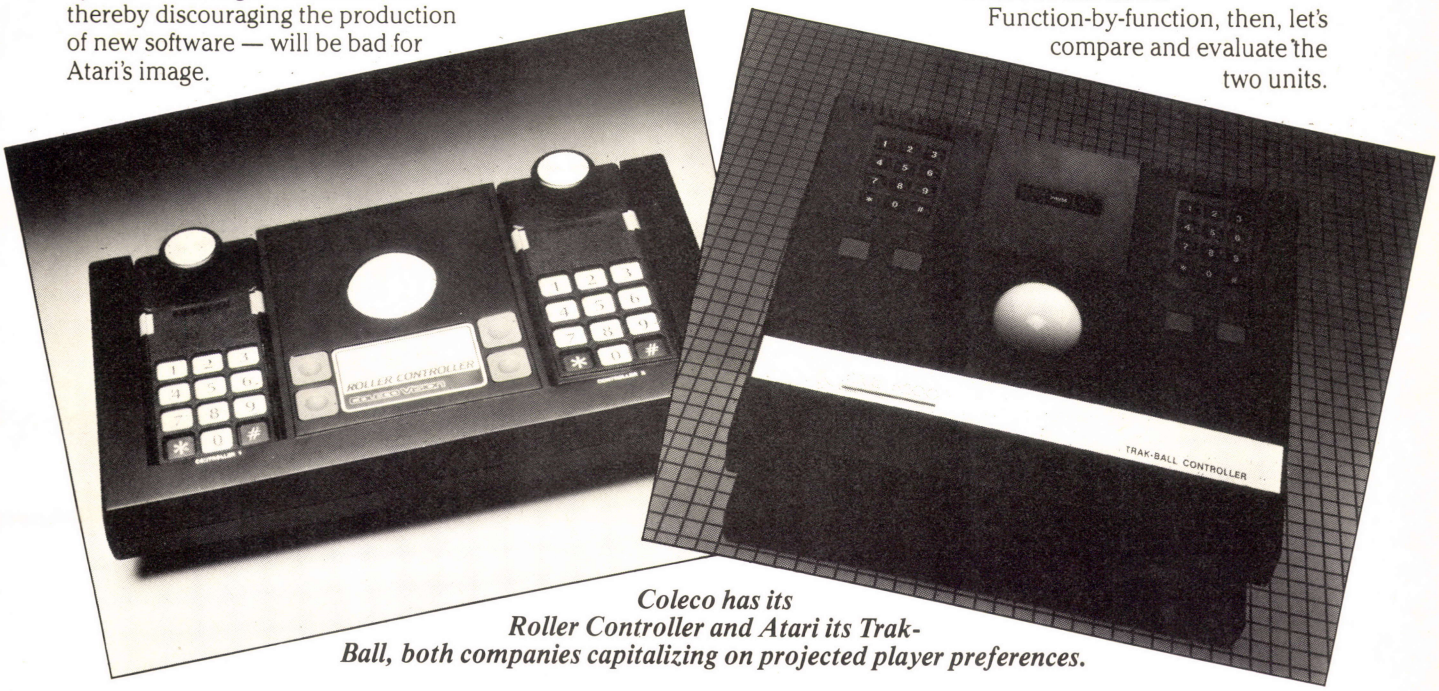
5. Atari will no doubt create a 2600 expansion module for the 5200. However, that in itself will not be an inducement for non-videogamers to spend over two hundred dollars for a package when they can get the basic 2600 for one-half that sum.

ColecoVision vs. the 5200

Whatever their assets and drawbacks, these two units are the most sophisticated on the market. It's fair to call them "the best," but only with qualifications: both the 2600 and Odyssey 2 are easier to use and neither ColecoVision or the 5200, at present, has voice capacity, a selling point of Intellivision and Odyssey 2. Furthermore, several months down the road Odyssey 3 may prove *itself* to be state of the art.

But in the fastmoving videogame and computer field, one can't live for what may be released a half-year down the pike. Because six months after *that,* something even more extraordinary is bound to be released. At least ColecoVision and the 5200 have add-on capability, as described elsewhere in this issue.

Function-by-function, then, let's compare and evaluate the two units.



Coleco has its Roller Controller and Atari its Trak-Ball, both companies capitalizing on projected player preferences.

Price

We mention this first because it may be enough to settle the issue of which unit to buy.

In most locations, the 5200 sells for an average of $250 as opposed to $180 for ColecoVision. (Bargain-hunters *can* find the 5200 for as low as $190 on rare occasion.) Though we have elected to compare the consoles as equals, *if* price is a concern for you, ColecoVision has to get the nod. Only the most discriminating videogame players will benefit from the use to which Atari has put those extra seventy dollars.

Software-wise, the prices of games for both systems are equitable, falling in the thirty to forty dollar range.

Atari 5200 Videogame System

The Console

Though this is the least important aspect in terms of entertainment value, it should be noted that the 5200 is by far the more stylish of the two. The wedge-like design is sleek and chic, dressed in smoky plastic and an attractive silver band. ColecoVision is flat, charcoal-colored, and comparatively drab.

Both units have compartments for the storage of their controls.

Controls

Both control units are roughly the same oblong size, Atari measuring 2¼ x 6½ vs. ColecoVision's 2½ x 6¼. The Atari controls are slightly heavier and more solidly built, although, playwise, each boasts versatility the other lacks.

In ColecoVision, there is a knob on the joystick which serves as a paddle — used, at present, primarily with the 2600 expansion module and paddle games. While it *is* slightly more rigid than Atari's own 2600 paddle, it is not so resistant as to hinder gameplay. All that's required is some getting used-to.

However, this asset is more than offset by the pause capacity in the Atari unit. If the phone jangles or doorbell rings, you don't have to sacrifice your video gains to tell the caller to get lost. Tap a button and the screen freezes.

In terms of the joystick itself, although *both* are far too stubby for the discriminating player, the 5200, unen-

WHAT IS THE FUT

We asked representatives of the major companies in the industry to respond to this two-pronged question: what is the future of the Atari 2600, and how will videogaming in general fare in light of the burgeoning home computer market?

Randy Rissman, president of Tigervision: Our feeling is that, for the next two or three years, the future of the 2600 is very good because there are so many of them out there and so much software available for it, and because it is so affordable. I do think, however, that the home videogame market is going to be squeezed very hard by the home computer market.

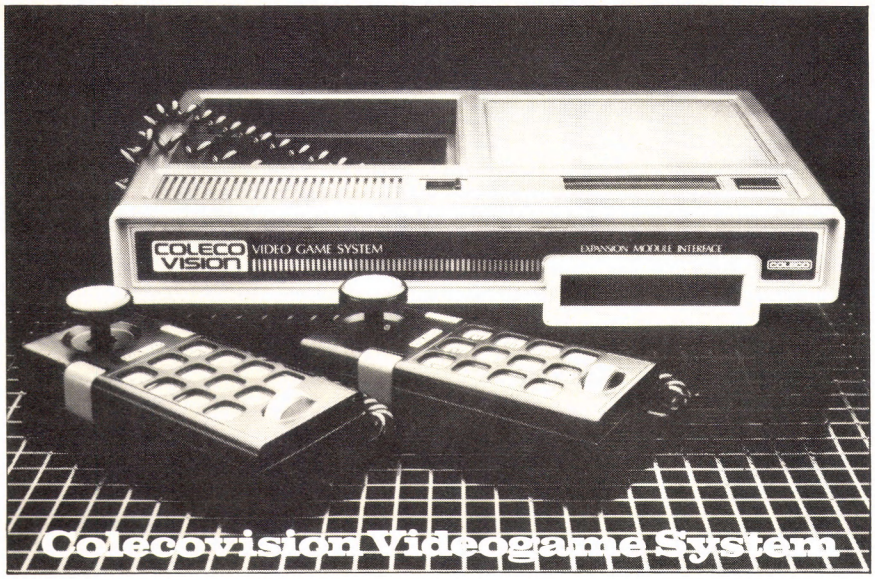
Rich Stearns, vice president of consumer electronics, Parker Brothers: ColecoVision and the Atari 5200 are the best bets for survival in the industry, but the personal computer will eventually overwhelm both of them. There is no difference, of course, between videogame units and computers; they are both based on microprocessors. But videogames are just a limited example of the kinds of gameplay that can be achieved on a personal computer. Everything a videogame can do, a computergame can do better.

Bob Gardner of Starpath: There have been a couple of other peripheral devices very similar to ours (the Supercharger) that have been announced and will be introduced into the market shortly, which we feel lends validity to what we've done already. We think that the market for the 2600 is going to be viable for quite some time to come. The latest figures I have seen indicate that, right now, VCS's outnumber home computers nine to one. Figures also show that, by 1986, those numbers may be two to one. We'll watch that very carefully and probably adjust our plans three times a year based on what's happening in that market.

Ray Dettling, product development manager, Data Age: Of the twelve or so million 2600s out there, you really have to wonder how many of them are in the closet, and how many users have moved up to the 5200 or Coleco or personal computers. It's something you have to consider. I'd say the 2600 has a three year life. We're essentially wearing out all possibilities of game play. There are many more avenues to explore, and we will, but you reach a point of diminishing returns trying to squeeze them out of the 2600. Right now, to succeed in the VCS market, you have to be creative as hell. If anybody does a five year business plan based on the VCS, that would be naive.

Name and company affiliation withheld: I think the Atari 2600 has a long future. In electronics, that could be a year.

Dave Ruckert, director of marketing, Atari: The sheer fact that we have over ten million units in the field and that it's still selling as the number one



Colecovision Videogame System

cumbered by the paddle knob, allows you to grip the handle more securely. It is also better-anchored in the control base: it moves as though in wet cement, allowing for more precise placement than its ColecoVision counterpart.

In the area of action buttons, ColecoVision has a slight edge, since its buttons are larger and less tiring to use. Keeping the tip of your finger jammed against the Pez-sized 5200 button can lead to a mighty sore digit in a very short time.

Both companies offer convenient through-the-mail repair services for their controls (indeed, for all their hardware), so all things are equal there. And the controls are detachable, so there's no need to pack up the entire unit and send it to the shop just for a broken joystick.

All things considered, the 5200 gets the gold for the better controls.

Adventure Software

Before looking into the quality of each system's software, here is a roster of what is currently on the market:

COLECOVISION:

Zaxxon
Cosmic Avenger
Space Fury
Space Panic
Venture
Ladybug
Mouse Trap
Carnival
Turbo
Donkey Kong
Donkey Kong, Jr.

5200:

Space Invaders
Pac-Man
Star Raiders
Asteroids
Defender
Missile Command
Countermeasure
Super Breakout
Centipede
Galaxian
Qix
Vanguard

And, upcoming for each of the units (with more titles to be announced):

COLECOVISION:

Gorf
Pepper II
Slither
Wizard of Wor
Mr. Do!
Buck Rogers
Wild Westerner
Victory
Frenzy
Tunnels and Trolls
Dracula
Subroc 3-D
Looping
Omega Race

URE OF THE 2600?

product in the market, makes it the standard in the industry, in effect. It has been growing during the period of time that the 5200 and ColecoVision have been on the market. All of our records show that it will continue to grow. People will try to take advantage of this installed base by introducing products that will work with it. We will obviously be at the forefront of that activity ourselves. What the engineers are dreaming up with these chips is incredible. I don't know what is around the corner, but my impression of this business is that everything we do will be out of date in six months.

Dave Morse, president of Amiga: The reduction in price of the 2600 and the existing base of software and the modifications and enhancements will combine to allow the machine to last in the market for at least a couple more years, even in the face of superior systems. But there are feasible technologies for use with the television that are going to knock the socks off people, systems that will be coming out in 1984-5. They will be expensive, but at that point the market for the 2600 will begin to tail off.

Frank O'Connell, president of 20th Century Fox Games: I probably don't share the opinion of many of the people in the industry about the impact of computers on videogames. I think we're seeing a temporary convergence of the game console market and the personal computer market. I think they're going to diverge again, for this reason: if you're starting out to design a piece of hardware and your objective is maximizing the interactive entertainment value of the system, that's going to lead you down quite a different path than if you were building hardware for its computing power. On a long term basis, computers and interactive entertainment pieces of hardware are going to be designed for their separate purposes. For the moment, computers will play games, but what I think will make the difference is in the kinds of peripherals that will be eventually developed. The keyboard, if that remains as a basic of the computer, will act as a deterrent to that becoming an interactive piece of entertainment hardware. There is a large group of people who will never be interested in the end benefits of a personal computer, at least in the form it is taking today.

I think the 2600 still has a pretty good future. Even with the limited hardware, you're going to see breakthroughs on the software side. People are approaching us with various aspects of voice and enhanced graphics. People sure are making that little chip set do more. It continues to amaze me. You're going to see innovation in terms of various forms of controlling and the intensification of the interaction.

Arnold Greenberg, president of Coleco: There will be a continuing, strong market for entry-level game machines like the 2600 and our Gemini as well as the advanced systems such as

Continued on page 75

5200:

Kangaroo *Jungle Hunt*
Dig-Dug *ET*

Objectively speaking, both systems offer some very choice licenses. Those for the 5200 are for the most part the better known, since Atari had the prestige and financial clout to land them and, in the case of *Kangaroo* and *Dig-Dug,* were the manufacturers of the original arcade games.

Needless to say, the player's personal taste has a lot to do with which games are "better". In all instances, these cartridges are so close to their stand-alone counterparts that arcade buffs won't be disappointed. The only disadvantage remains the comparative lack of responsiveness and the lightweight of the controls. Atari may have the superior controls, but they're still not in a class with the stand-alones.

Both systems offer excellent animation in their software: the *Space Invaders* aliens are throbbing, liquid, nightmarish creatures, while the meticulous movements of the entities in *Qix* will leave you sneering at mere mechanical tools like Etch-a-Sketch; *Donkey Kong, Jr.* and *Space Fury* put most cartoon animation to shame.

However, there's something chilly about the 5200 graphics.

For one thing, the ColecoVision colors are far more vivid, far friendlier. Atari fills the screen with somber brown-reds and grim deep purples. This may well be an attempt to appear more adult, since ColecoVision colors tend to be very bright comic book primaries. But the result is, in fact, a washed-out look for the 5200.

This is particularly evident in *Galaxian,* where Atari packs up to three colors in each alien. An impressive feat, but because the colors are inherently drab, they muddy together and cost the characters definition against the black starfield. Atari would have been wiser to leave it up to the videogamer to turn down the brightness on the TV than to have gone with a dull pallet.

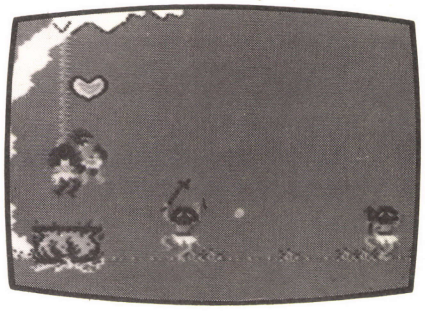
To be sure, fans of *Galaxian* et al won't gripe a bit. However, the untutored videogamer will prefer the tomato-bright Space Monsters of *Space Panic* to the fawn, brown, and violet invaders of *Galaxian.*

In terms of sound effects, there is no "better," only "different."

ColecoVision has opted for a lighter sound to their games: wind-chime light, whoopee-cushion raspberries, and music which ranges from honky tonk to pared down William Tell.

Atari, on the other hand, has some delightfully nasty audio. *Space Invaders* in particular is vicious and intimidating, more so than the arcade game; the other shoot-'em-ups like *Defender* and *Galaxian* literally roar off the screen. They make ColecoVision's *Zaxxon* and *Space Fury* sound as timid as a turkey shoot.

The seasoned arcader will much prefer the sound of the 5200. All others must suit their own tastes.



Obstacles for the player/hero of Atari's witty* Jungle Hunt *include cannibals, gorillas, and sharks.

Children's Software

At present, only *Smurfs* is available from ColecoVision, with *Wizard of Oz, Cat in the Hat,* and *Smurfette's Birthday* in various stages of development.

Over at Atari, plans are underway to bring the Sesame Street characters and Charles Schulz's *Peanuts* menagerie to the 5200, along with other non-licensed properties.

Mattel has hinted that they may produce ColecoVision cartridges based on their Scooby-Doo, Flintstones, Bullwinkle, and Koolaid properties; their attitude toward the 5200 is to wait-and-see how it sells when the unit hits full production this year.

At present, by sheer weight of numbers, young children will have more to choose from with ColecoVision. However, until more of these cartridges are on the market, our attitude, as well, must be wait-and-see.

Sports Software

Currently available for the 5200 are soccer, football, and baseball cartridges, all of which are magnificent. Hockey, basketball, tennis, volleyball, and skiing are, as one Atari employee puts it, "likely candidates" for future release.

ColecoVision is set to unveil football, baseball, Rocky, and skiing. Horse Racing is on hold.

The Coleco skiing cartridge is unique in that it's from the point-of-view of the skier, the tips of the skiis visible as the player skids down the slope. That's a plus for armchair athletes.

As for the spectator sports cartridges, while the definition of the figures is weak — it's tough to work in much detail when the game focuses on the entire field — game-options are true-to-life.

Atari seems more committed than Coleco to developing sports cartridges, recognizing that there is an untapped audience for videogames among football fans, golf nuts, etc. However, each company will proceed in this area only as sales warrant.

This one's a coin-flip in terms of consumer satisfaction.

Summary

The average consumer will be more comfortable with ColecoVision, the arcade buff — despite Coleco's *Zaxxon* — with the wealth of treasure available for the 5200.

However, apart from the price differential, the obvious "plus" in Coleco's corner are its expansion modules: the gas pedal/steering wheel for *Turbo* and 2600 adaptor, with computer keyboard and super system (expanded memory games) to come.

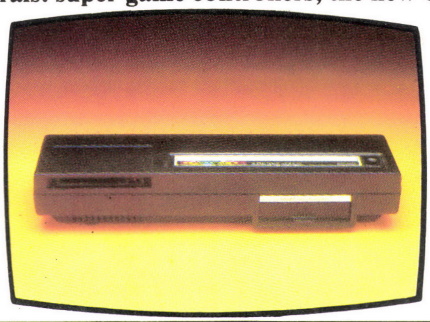
Nothing has been announced for the 5200 as yet, although Atari has computer attachments and a 2600 adaptor on the drawing board.

Though the Connecticut-based "upstart" in the videogame field has the edge at present, Atari has plans for their unit which have yet to be revealed. And, as that company has shown in the past, they are unyielding competitors and endlessly resourceful. With a very sound master component like the 5200, they may yet vault ahead of Coleco.

We'll be taking a second look at both units before the Christmas buying season to let you know how they stack up!

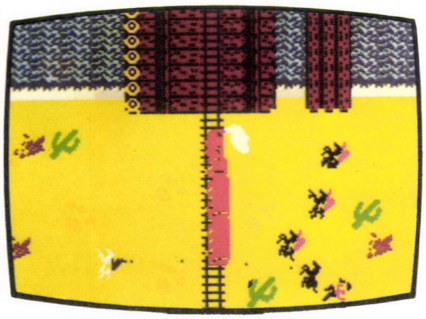
COLECO'S 1983 HARDWARE

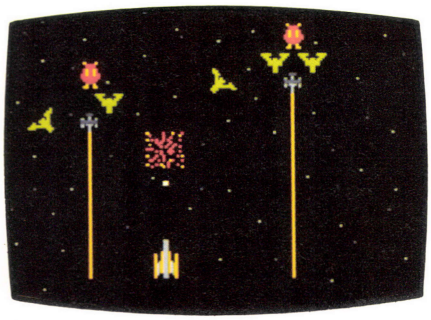
Coleco's much acclaimed peripherals: super-game controllers, the new Gemini system and driving module.

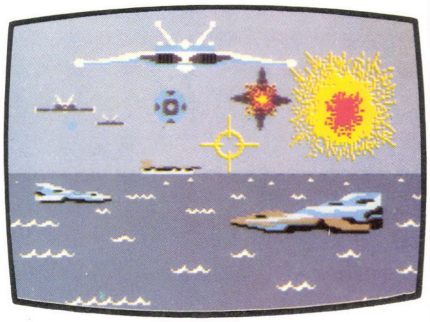


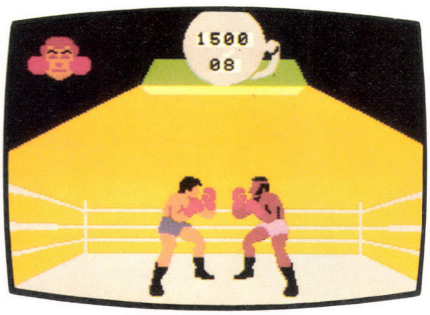
COMING FROM COLECO IN 1983

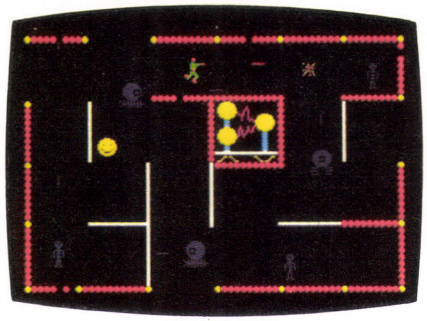
Coleco has scheduled a wealth of new game cartridges for release in the coming months. Among them are (from top to bottom, left to right): *Wild Western, Gorf, Subroc, Sword and the Sorcerer, Rocky Super Action Boxing, Mr. Do, Frenzy, Slither, Wizard of Wor, Buck Rogers,* and *Tunnels and Trolls. Dracula,* originally scheduled for a 1983 debut, has been pushed back to early 1984.

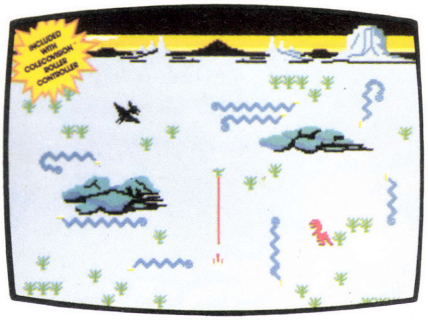


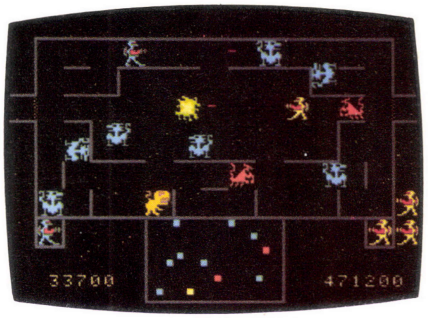


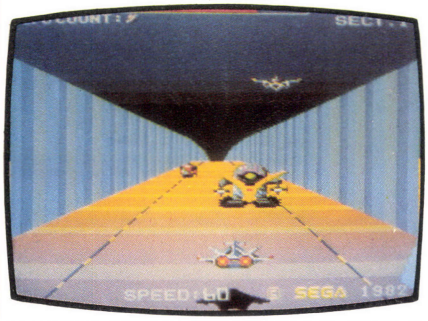


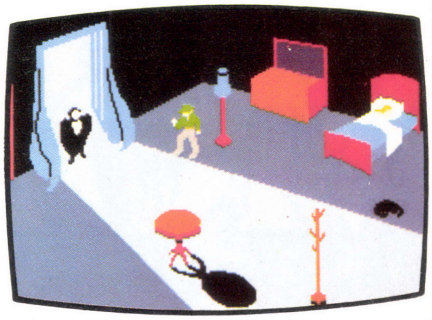












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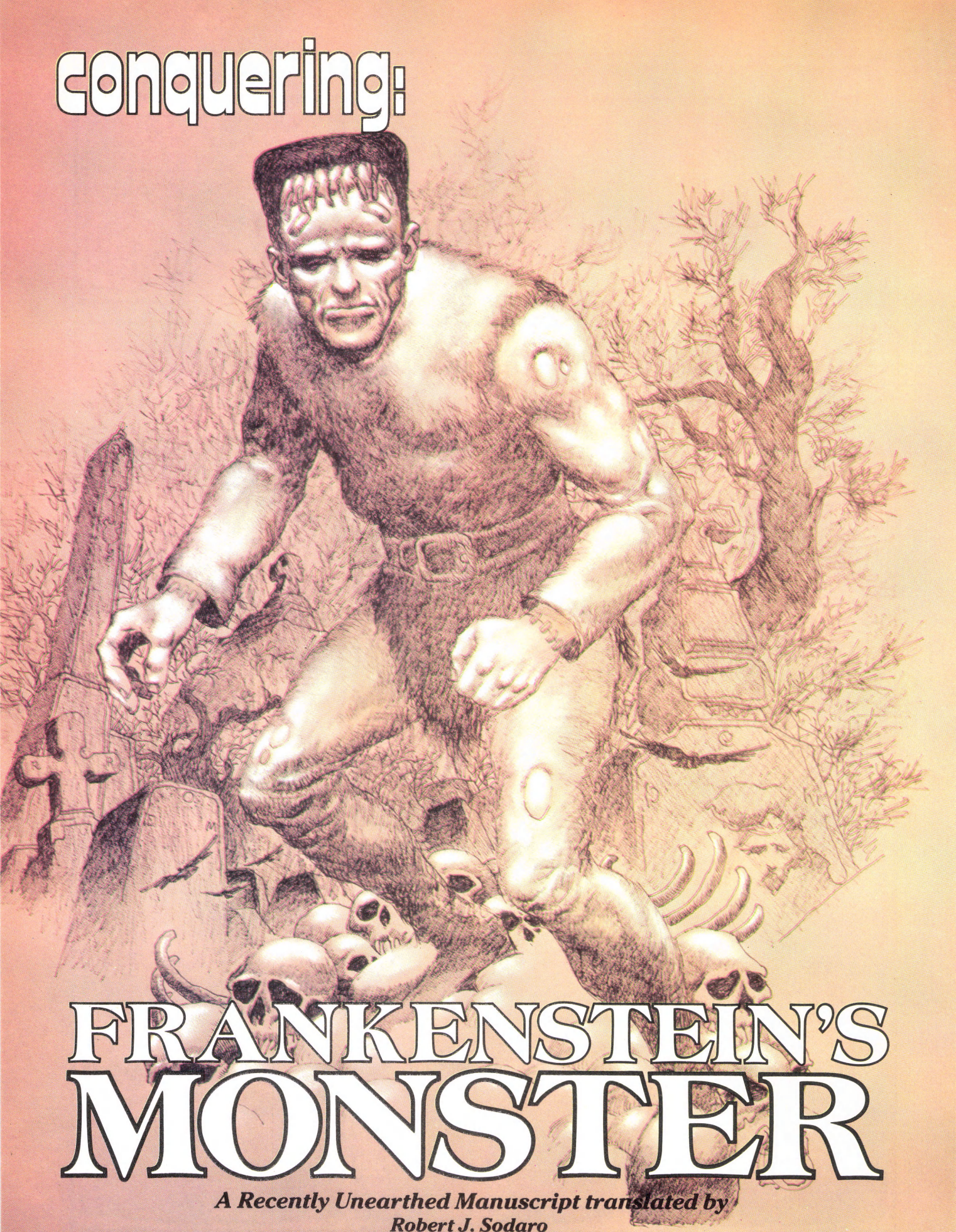


FRANKENSTEIN'S MONSTER

A Recently Unearthed Manuscript translated by
Robert J. Sodaro

ART © 1983 ALEX NINO

The end is near. Fever chills my brain and wracks my body a-tremble, and my eyesight grows dim.

No matter. *It* will be loose soon, and will surely quicken my passage to the bosom of my Lord.

With trembling fingers — and with my own blood serving as ink — I complete this manuscript. Dear reader, you must believe this wild-seeming tale. You must do as I bid you. For the love of God, you must! *You must!*

I. Wherein the reader is told, in brief, what he or she must do.

Doctor Victor Frankenstein, once a God-fearing man who was corrupted by ambition and pride, has created a monster by animating the flesh of the dead with electricity. The creature stands in the courtyard of the doctor's castle, receiving blinding bolts of lightning.

This is a task for one, perhaps two, stout souls. You must descend into the bowels of Frankenstein's castle, retrieve a brick and return it to the courtyard, there to place it around the grotesque golem. You must make this hazardous quest seven times, for seven bricks are required to contain the monster.

I beg you to do this quickly, before the creature is fully charged and can escape ... or good people everywhere shall live in fear and children will not be safe in their beds.

II. Being a further embellishment of the hazards the reader shall encounter.

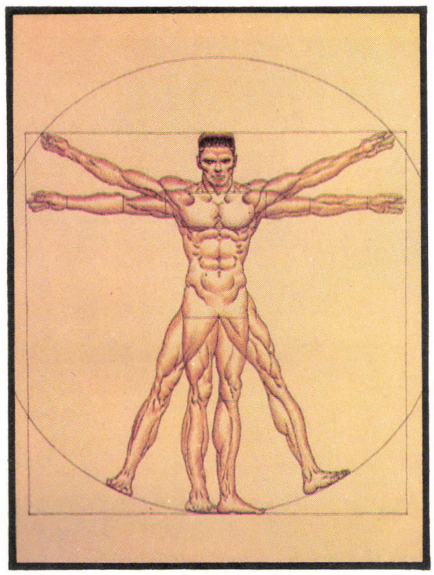
If the reader scoffs at Frankenstein's theories of life after death, hear me: you shall begin this mission with three lives. Yes, and you shall set out with units of life force. But read on.

Life force is lost if you come in contact with a ghost, a spider, or a bat. Likewise, you shall lose life force units if you fall through a trap door. And, should you tumble into the vat of acid, you shall forfeit one of your lives as well as a plethora of life force units.

In the confines of the castle, there are three modes of movement available to you: running, jumping in place, and leaping while at the gallop.

Now then.

When you first enter the castle, you will find yourself on the top level, with



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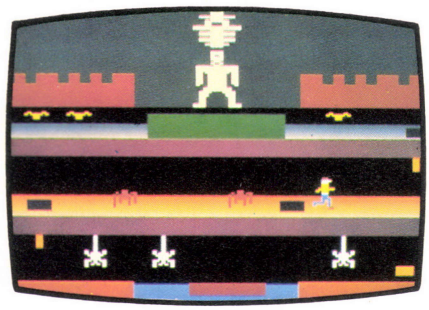

the hideous creature looming above you. You will encounter a ghost on this level, one which you shall not be able to jump over. Contact with the ghost will cause you to be paralyzed for a few moments.

Find the accessway and proceed down to the second level. Here you will find trap doors and tarantulas, the number and disposition of which depends on which brick you are seeking to recover. Again, if you are touched by a tarantula, you shall be paralyzed temporarily.

Did I mention that the task becomes more difficult with each brick? I do so now. On this second floor, for example, the trap doors will change in number and size, from a few large traps to many smaller traps which you must skip over most lightly. The number of tarantulas changes accordingly, all quite cleverly calculated by that damnable Frankenstein to trip you up and send you tumbling into his acid pool.

Should you find the accessway on the second floor, you may descend to the third. Your brick is here but, alas, so too is the vat of acid and a host of spiders.

Between you and the all-important brick is the vat. In the vat is a block which serves as an island of safety. You leap across to the block and leap again to reach the brick.

You are no doubt saying to yourself: I'll wager it is not so simple after the recovery of the first brick. You are quite correct. In your quest for future bricks you will encounter: three small blocks; one large block that moves from side to side; three small blocks that move; one large block that *vanishes* from time to time; and, finally, one small block that vanishes and moves. Blast you, Frankenstein!

This third, basement floor also contains spiders which drop from the ceiling on web threads and return. If one of these arachnids touches you while you are jumping, you will fall into the vat.

Should you retrieve a brick, you must retrace your steps all the way to the courtyard. But before you can place the brick around the monster, you must race through a swarm of bats. These disease-carrying offspring of satan will push you backwards and cost you precious seconds.

Once you have fought your way to the doorway straight, ahead, and to the center of the hall of bats, you will find yourself at the feet of Frankenstein's monster. Place your brick irreverently at its feet, take a deep breath, and resume the task in the manner outlined above.

III. In which the correspondent, on the very brink of death, provides strategies that will allow the reader to avoid a similar fate.

Gentle reader, you may have already guessed that the crucial skill to be learned in this matter is timing your jumps over tarantulas, trap doors, and across those insidious blocks.

Vaulting the tarantulas, trap doors, and the first block is a relatively simple matter, though the spiders which drop from the ceiling over the acid vat have cost many a good man (and woman) their lives. While at the vat and block, time your jump in such a way that a spider is on its ascent in the spot on which you will land. Another will probably not descend by the time you arrive.

Now to the matter of the blocks. Spiders aside, it is easy enough to reach the first block in the later stages of the

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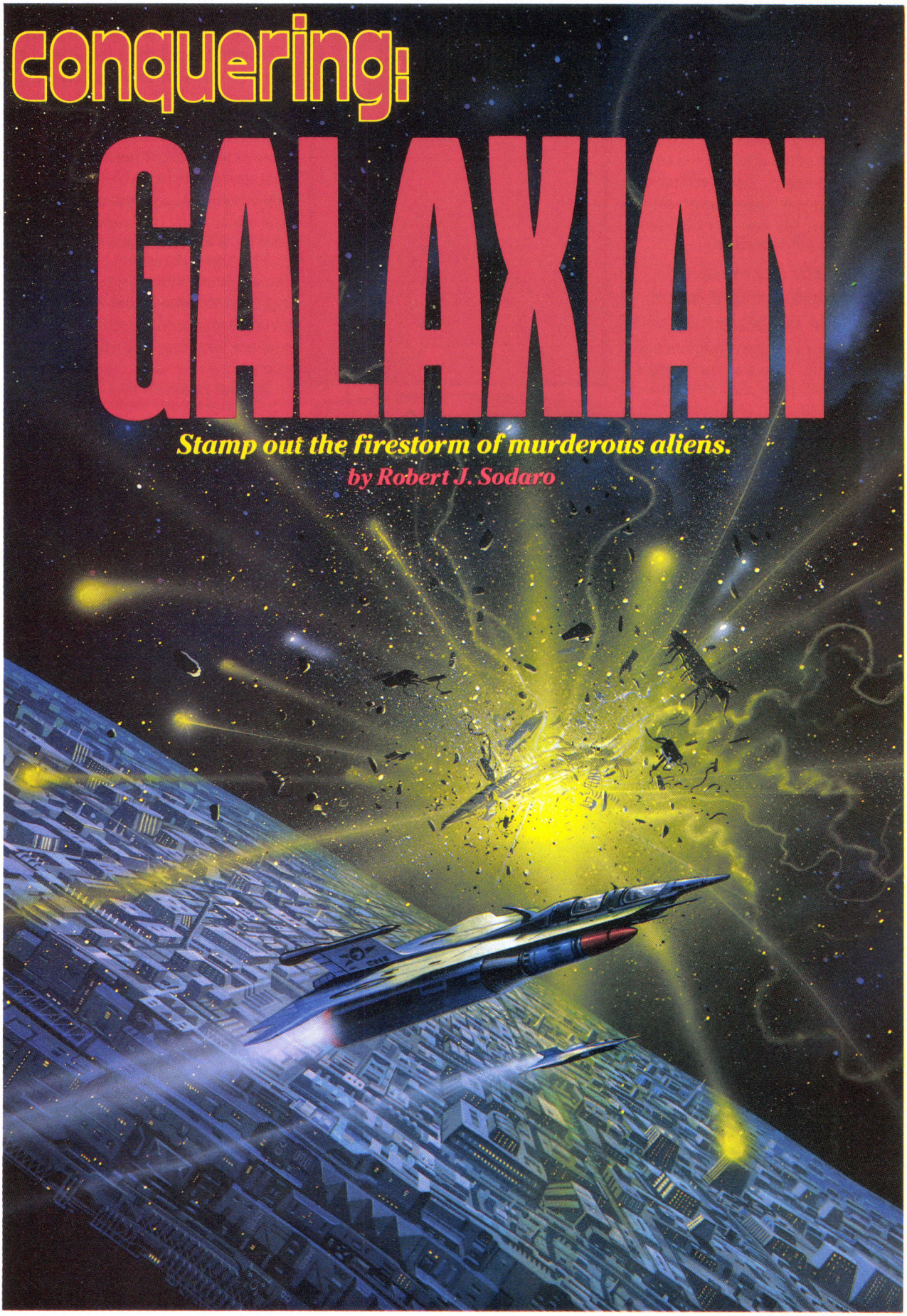
conquering: GALAXIAN

Stamp out the firestorm of murderous aliens.

by Robert J. Sodaro



ART BY ANGUS McKIE © 1983 YOUNG ARTISTS LTD.

Object

It is the year 2005, and you are part of an elite corps called Atari Force. You are under the authority of Commander Martin Champion. Right now you are stationed at a lonely outpost at the edge of known space, and your orders are simple: stop the Galaxians ... at all costs.

In this Atari 2600 adaptation of the arcade hit you are in command of a small squad of laser bases. The terror you face is an ancient race calling themselves the Galaxians, who, for a time beyond counting, have ravaged untold galaxies. No one has ever been able to stop them. Still, it is your task to try.

The Galaxians are not only ruthless, but they are excellent tacticians. They attack in successive waves, each wave increasing in intensity. A Galaxian wave is actually a small, but well organized, task force. The bottom three rows of each formation consist of drones. The next row up are emissaries, after them are escorts, and then the two flagships.

In addition to shifting back and forth in formation, ships will break off and dive at your laser base. As the diving ship is making its run it will drop bombs on your base. The player begins each game with three bases.

Variations

Galaxian is a one player game. There are nine levels of difficulty. To increase the difficulty depress the game select switch. The level of the difficulty appears in the lower right hand corner of the screen. The difficulty level is the same as the wave number. Thus, if you begin the game at level two, you will progress to level three at its completion.

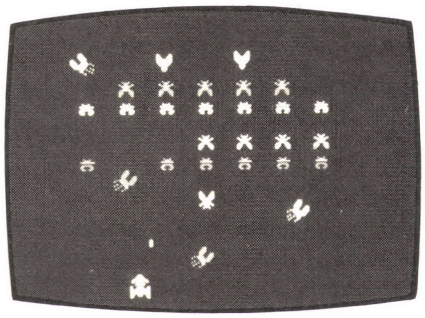
With the left difficulty switch in the "A" position the laser base is a single firing gun. In the "B" position the base has continuous firepower when the fire button is kept depressed.

Scoring

Point value of Galaxians are determined by their rank, their position in formation, and whether or not they are in the attack mode. The drones (bottom three rows-green) are worth thirty points; in flight they are worth sixty points. Emissaries (fourth row up-purple) are worth forty points, eighty in flight. Escorts (fifth row up-red) are worth fifty points, in flight one hundred. The flagships form the top row (white) and they bestow sixty points in formation. In flight they are worth one hundred and fifty points when destroyed.

The flagship always attacks with its escort, unless of course the escort has already been killed. By destroying the flagship and one escort you will score two hundred points. When you burn both escorts and the flagship the point value is three hundred points. Further, if you manage to blow away both escorts before hitting the flagship you will score a whopping eight hundred points.

An extra ship is awarded when a score of seven thousand points has been achieved.



Patterns

At the start of *Galaxian* the alien ships appear at the top of the screen, and your laser base appears at the bottom center. The Galaxians immediately begin to shift slowly to one side of the screen as the action begins. When they reach the left side they then shift to the right, and vice versa.

Depending upon which side the enemy is moving towards, a ship from the opposite side will break off and attack you. When attacking, a ship that is part of the left half of the formation will spin sharply to the left to begin its descent. This is so even if the ship happens to start its run from the right side of the screen. A ship from the right half will break to the right and dive. Ships from the center column will break either way before diving.

When making its dive the Galaxian will make a wide sweeping turn that will take it approximately to mid-screen. The invader then turns, sweeps back the other way, and drops off the screen. All during its dive the ship will be dropping bombs on you. Only attacking ships can bomb, and ships in the attack group usually come from the last column on each side.

The angle and slope of the turn is determined by the location of your laser base. The Galaxians can "see" your base and will home in on it. If you stay in the center of the screen they will make short curves for the maximum amount of saturation bombing. When the base is to one side or the other, the Galaxian attack tends to resemble more of a glide than a dive.

While you are at the side, if a ship from that side begins its descent it will fly off the screen and return immediately to its position in formation. When the ships do return to formation they drop from the top of the screen into the column from which they started.

Strategies

Since *Galaxian* has a display mode (as do most of the newer games) it is best to watch for a short while before beginning game play. The first waves are slower than those that follow, so take time to line up your shots at the start.

There are several strategies that can be employed in *Galaxian*. However, the player should never be so wedded to any particular tactic that (s)he loses track of what is going on. As the game progresses the Galaxians will attack at faster rates and from both sides at once. Also, the longer a formation remains on the screen the more erratic the patterns its ships will fly.

A tactic to build points in the lower waves is shooting at only the attacking ships, and ignoring the ones still in formation. Do this until the flagship and escort make their run. Then ignore all other ships in play and go for the big money. Try to shoot out the escort first, but burn the flagship as soon as you are able. It is more important that you hit it while it is moving than to miss it attempting for high scores.

Towards the end of a screen, or on the advanced screens, this tactic is not always possible, due to the speed and frequency of attacks. The best time to hit Galaxian ships is when they are diving, and are on an angle to you.

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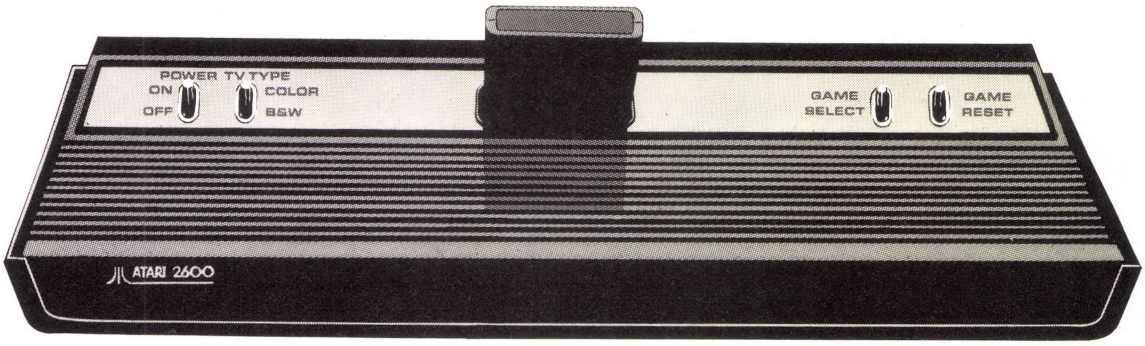
THE INCREDIBLE EXPANDING MACHINE



A Parade of Peripherals Can Make the Atari 2600, 5200, and ColecoVision into Race Cars, Computers, And More.

by Richard Meyers

Once it stood alone: a squat, dark machine with four switches and a slot, resplendent in its solitary power and influence. In 1977, the Atari 2600 Videogaming System was just about the only game in town. Sure, there were other game systems, but they seemed pathetic in light of the Atari versatility, library of game cartridges, and monetary backing.

Things changed fast in the videogaming world. Just after the turn of the decade, Atari was assailed from all sides by a cornucopia of manufacturers eager to tap into the home video entertainment marketplace. They examined the Atari 2600 from every conceivable angle and whenever they saw any aspect of the system even minutely lacking, they raced to compensate with their own equipment.

Atari had to move fast and move well if it wanted to keep up with itself. This led to a wide range of supporting hardware and software, all bearing the Atari name. Their first step was an assured one, but it led to unforseen problems.

"The Atari 5200 (Home Entertainment System) was created for players who demand state of the art video game technology," said Michael Moone, president of the company's Consumer Electronics Division. "We have created two home game systems in the same spirit in which an automobile manufacturer builds different models to suit different tastes."

It was not created, it turns out, for people who had invested hundreds of dollars in the 2600 and its many cartridges. The 2600 games could not be played on the 5200 and vice versa. The company's automotive metaphor only held if there were players who liked buying cars with only half a motor. It became immediately apparent that the company had to do something to assuage the many outraged 2600 owners.

Although the 5200 cartridges could not be made to work on the less sophisticated 2600, the 2600 cartridges could be adapted for play on the more advanced game system. By the time that adaptation module was ready, Atari had given birth to a wealth of other equipment which were designed to please all Atari enthusiasts. This started with the most basic of system peripherals: the joystick.

The initial 2600 controller was spartan — a short pole on a squat rectangle with a red button. After a healthy bout of *Pac-Man,* this stiff, somewhat awkward stick left players' hands calloused and throbbing. The 5200 had a sleeker device, the "universal game controller." It looked like a pocket calculator with a stick growing out of it. This control stick was easier to manipulate and in addition to a firing button, it also had a "pause" button, which could freeze the game action.

The 2600 owners were jealous. They wanted equal ease of use. They got it in abundance. In March, TG

Products unveiled its TJS-400, "the first joystick specially designed and contoured to fit comfortably in the palm of the hand," says Don Geyer, the company's director of marketing. Not to be outdone, Atari is releasing its own "Proline Joystick" just four months later. Although appearing after the TG Product, Atari hopes that the difference in price will hold off anxious players. The Proline is some fifteen dollars cheaper than the TJS.

Not resting on this laurel even momentarily, Atari also beat the competition to the punch on the Remote Control Joystick. This allows 2600 players further freedom since it controls the game action up to twenty feet away from the TV screen. In addition, it allows them to start or reset the game without having to return to the console, a feat even the original controllers were unable to accomplish.

Atari's line of hardware accessories grows by leaps and bounds. Shown here are remote controlled joysticks and their interface (for players with the eye of an eagle), the trakball (the joy of the new breed of arcade players) and the heavy duty joystick (you dish it out, it can take it).

Another initial plus for the 5200 was the Trak-Ball Controller. It allowed greater speed and freedom of movement on games such as *Missile Command.* It arrived in stores during March, with the promise that the 2600 trak-ball would be coming hot on its heels in June. Still, it didn't seem to be enough. Some 2600 buyers felt cheated. They felt as if Atari was forcing them to dump their simpler games consoles and move up to the 5200.

"We will continue to support the (2600) Video Computer System," Moone promised, "with fantastic new games, comprehensive service and the strongest advertising in the industry." The public wanted more. They wanted Atari to give them some good reasons why they should hold onto their 2600s. The company recognized this and started delivering. The Atari Kids' Controller is one example.

To correspond with a new library of game cartridges especially devised for children — utilizing the name and fame of *Sesame Street, Peanuts,* and Walt Disney cartoon characters — Atari created the simpler, less abrasive Kids' Controller, a five by seven inch basic keyboard. With each game in the Atari Kids' Library comes an overlay which is placed onto the controller's twelve keys. Each is designed to capture the child's understanding immediately.

The more telling of Atari's efforts to placate and reward 2600 owners is the low cost computer keyboard module introduced in February. With it, the 2600 VCS becomes the "2600 Computer," a beginner's thinking machine with only 8K bytes of memory (as compared to Commodore's 64K or Apple's basic 36K). This does not make the initial 2600 Computer a powerful machine, but, according to Moone, it was never meant to be.

Starpath's Supercharger increases the 2600's RAM capacity fifty times.

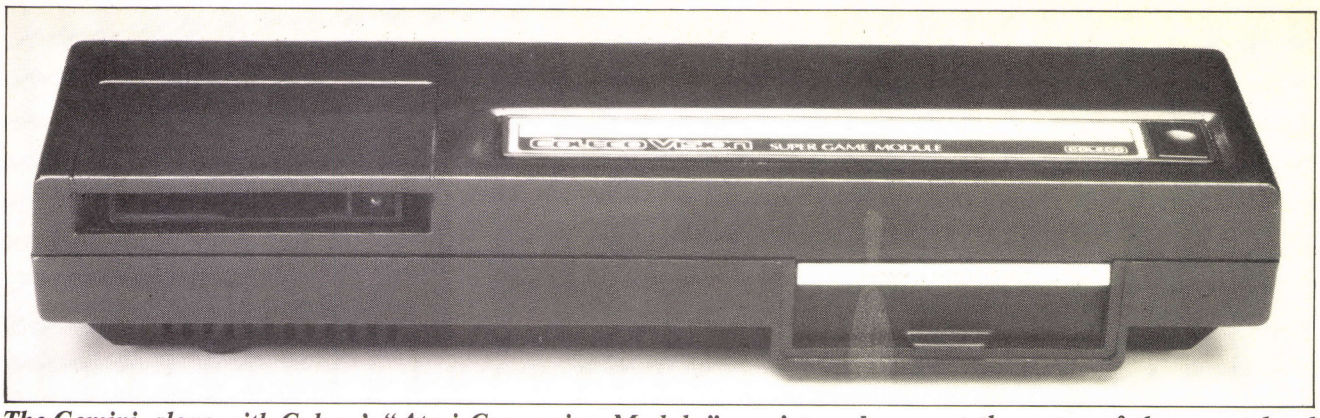
"The 2600 Computer will represent an easy first step into the world of computers," he stated. "Millions of people will buy a home computer in the next few years solely for the purpose of learning how to use one. The 2600 Computer, which can be installed in minutes by snapping it directly atop the 2600 Video Computer System, requires no prior knowledge of programming by its users."

In addition to Atari's computer module, Spectravideo and Entex have released similar products. At the same time, companies have begun fashioning modules and enhanced cartridges designed to expand the memory capability of the 2600. These include Starpath's Supercharger, Amiga's Power Module, and CBS' RAM Plus chip. More such innovations are expected to be released in the coming years.

Atari is dedicated to creating a wealth of additional materials which can build the 5200 Computer into a full fledged word processor, business or educational tool with a present memory ceiling of 32K. And, for one of the few times in recent history, the 5200 computer keyboard module is set to come out sometime after the 2600 addition. Usually it's the other way around.

Although Atari is moving quickly and strongly forward, one competitor is taking giant steps to become the ruler of the home entertainment field. When the 2600 was basking in lone triumph in 1977, one of its weakest imitators was Coleco's *Telstar,* a three-in-one game system that died a pretty horrid death in the marketplace. After that fiasco, few suspected that Coleco Industries Incorporated would emerge from the ashes with an extremely well conceived and strongly executed game plan for video supremecy.

It started, of course, with ColecoVision, their "third generation programmable video game system." But unlike the Atari, this console was never supposed to stand alone. "We introduced it and promoted it as the ex-



The Gemini, along with Coleco's "Atari Conversion Module," as pictured, were at the center of the recent legal dispute between Atari and Coleco. The dispute was settled and both modules are on the market.

pandable video game system," says Barbara Wruck, Coleco's director of marketing services. "Its other initial features were superior graphic resolution and our controllers — which were better than what had been available."

Like the 5200, the ColecoVision controllers were calculator shaped, with a keypad. But setting it apart from the subsequent Atari product were the buttons on either side of the controller (which made it easier for left-handed players) and the joystick, which had a knob-grip at its crown for better handling and control. At the same moment the ColecoVision was released, the company announced its intentions.

"The most important feature of our system is its expandibility," Wruck reiterates. "You can add onto the unit. It is an open-ended system. It will not be outdated by another Coleco system. It will never be obsolete." Thus started a serious game of "anything Atari can do, we can do better," supplemented by a credo of "anything Atari might overlook, we won't miss." Coleco is totally dedicated to out-thinking and out-manufacturing the competition. They want to be first and they want to be best.

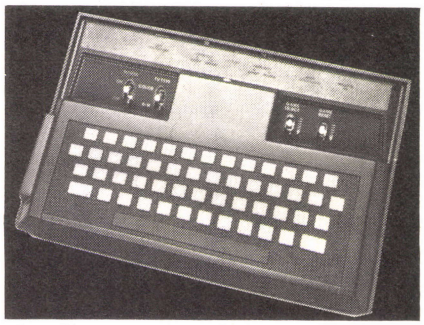
The first step was the "Atari Conversion Module" which allowed the ColecoVision player to utilize any 2600 cartridge. "We were taking advantage of the tremendous library of cartridges that were out there," says Wruck, "and also — and this is not sales puffery — we were allowing the Atari owners to 'trade up' to a ColecoVision."

Not surprisingly, this did not sit well with Atari, which instigated a court suit. But Coleco had already proven its ability to read the handwriting on the wall, so, while the details are secret, a settlement *was* reached (See *Behind the Scenes* in this issued). And the Atari Conversion Module kept rolling off the assembly line.

Also coming out of the factory was the "Turbo Expansion Module." "This allows the ColecoVision owner to engage in driving games," Wruck details "It consists of a console with a steering wheel and an accelerator. You use the ColecoVision controller as a gearshift." Included in the package was a *Turbo* game cartridge, based on the popular Sega/Gremlin arcade game.

These first two peripherals were just the tip of the iceberg. Coleco unleashed some more surprises in January. It wasn't so much what they were, but how well Coleco realized them. First, the "SuperAction Controllers." "They have a joystick, a keypad, and a speed roller," Wruck explains. "The hand has finger grips, like triggers, and by pulling those in various combinations, you can control different and specific figures on the playscreen."

Next came the "Roller Controller Console." "This is indeed a trak-ball," Wruck admits, "but it is set in a console which can also take the regular ColecoVision controller to creat a compact control center." Now Coleco had its basic system, its advanced joystick and its trak-ball. The system was complete, right? Wrong.



Atari's computer keyboard for the 2600 is inserted in the cart slot.

"We introduced the SuperGame Module in February," Wruck continues. "This module is real proof of our commitment to bring out advanced technology for 'add-on' rather than 'buy another.' ColecoVision is a third generation console. SuperGame is a fourth. It adds substantial memory capability. We are now talking 128K — real computer stuff. Instead of using cartridges, it takes 'SuperGame Wafers' — tiny credit card-sized wafers that have thirty-two times the memory capability of Atari cartridges."

And what does that mean? That means home game play indistinguishable from arcade game play. It also might mean home game play superior to arcade game play. "It gives us the opportunity to program up to one hundred screens," Wruck states. "Not only can we do what arcade games do, we can go far beyond that. And the best is yet to come."

The best means the ColecoVision computer expansion module. The company is not talking specifics, but during the summer of 1983, Coleco plans to reveal its ColecoVision Computer in all its powerful splendor. They fully intend, Wruck claims, to have as much of an impact on the home computer field as they had on the home videogaming field. And that's not all Wruck claims.

"As we look further ahead, we see the future entrenched with computerized home entertainment. We are planning and researching all aspects of that to make the ColecoVision System the base system for the home."

Gentlemen, start your engines. The race is full throttle. And the real winner will not be Atari or Coleco, but the consumer.

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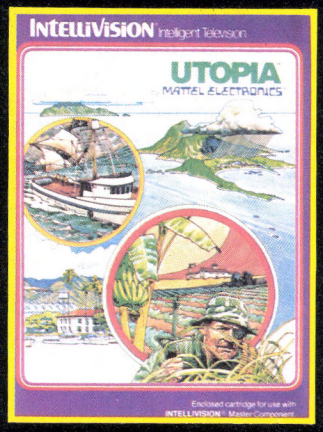
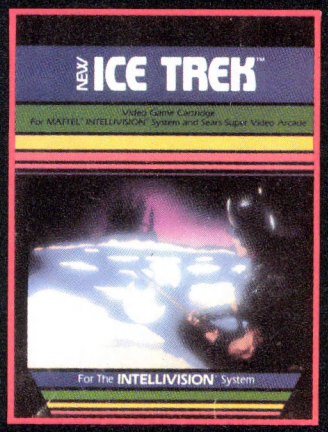
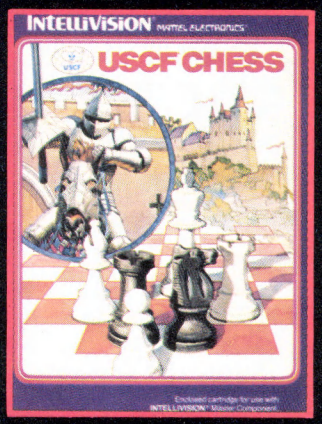
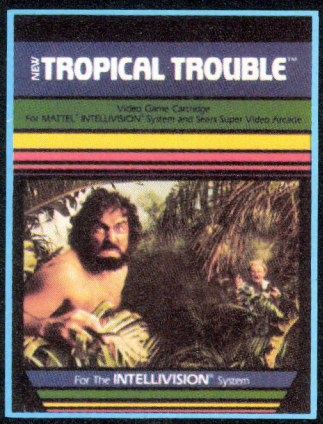
preview

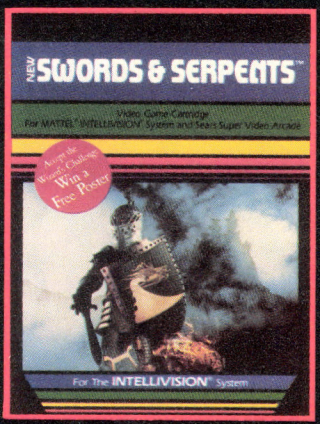
Our editors review the latest videogames











by E.C. Meade and Jim Clark

Adventures of Tron

Object

Tron is trying to get to the Master Control Program. In order to do so, he must catch the Bits which float through each of the four levels of the screen.

There are Tanks, Recognizers, and Grid Bugs pursuing Tron. They start at the top level and move relentlessly downward. Tron can escape them in one of four ways: by hitching a ride on the Solar Sailers which pass through each level; by crossing the Input/Output Beam which divides each level, thus activating an elevator to the next level; by jumping from one floor to another below it; and by a carefully timed leap over oncoming opponents.

After all the Bits have been snared — Tron vaulting up to snatch one at a time — the game repeats at a faster pace.

J.C.: I'm lukewarm toward this one. It's a good game for the 2600, but we've seen it before: multiple floors and projectile-firing opponents as in Apollo's *Infiltrate;* jumping over trios of objects ala *Pitfall;* grabbing objects from overhead, reminiscent of *Donkey Kong.*

The *Tron* theme gives the game some narrative movement, and the program is *not* an easy one. The field clutters quickly with agents of the MCP, and you've got to watch what's going on two or three levels above. The Tanks et al exit left or right and enter from that side on the next level down: if you haven't been paying attention, you may run smack into a Recognizer as it's emerging on your floor.

I prefer *Frankenstein's Monster,* which has the same multiple levels and numerous dangers, with the added pressure of trying to contain the monster.

E.C.M.: I approached *The Adventures of Tron* with reservations, most of the same which Jim mentioned above. But I've got to tell you, I got hooked on this one. I found it much better than *Frankenstein's Monster* because of the need to pay attention to what was happening all over, and the multiple strategies available: whether to ascend, stand still, or fall; whether to chance jumping the approaching enemies or sacrifice a floor by dropping; whether to stay on one level to catch all the Bits — there are seven per screen — or leave in the face of a Grid Bug and have to return to that floor later in the game.

The fact that M Network improved on what other companies have done is to their credit, not discredit. Which is not to say that this cartridge is *better* than *Pitfall:* they're different enough so that you'll enjoy both.

It is just possible that this type of game — with the energetic hero running from level to level and leaping adversaries and hazards — has run out of steam already. It remains to be seen if designers can come up with new and appealing variants to whet the public appetite.

Tron: Solar Sailer

Object

As a passenger on a Solar Sailer, riding energy beams about the computer world, you must shoot down Recognizers and cannon-firing Tanks — all the while making your way to the Master Control Program. Once there, you must intercept information in numerical form, numbers being flung by the MCP to every corner of its empire. Capture the correct numbers and place them in their proper order, and the MCP will overload.

E.C.M.: Like *Bomb Squad,* I found this Intellivision game hideously complicated. You'll have to study the manual for a few hours, and experiment with the game for twice that time before you can play with any skill — and even then, you'll have mastered a game which is neither as challenging nor as fast as the superb *Tron: Deadly Discs.*

Shooting as you ride the beams is no fun, since you use the disc to spray fire in all directions. And once you've traversed the map and entered the MCP, catching all those flying digits — the inverse of the "Space Warp" level of *Gorf,* in that you're capturing rather than destroying — will strike you as a very silly activity. I understand the symbolism, the binary code and all of that; but personifying the computer's impulses using Arabic numerals seems incongruous.

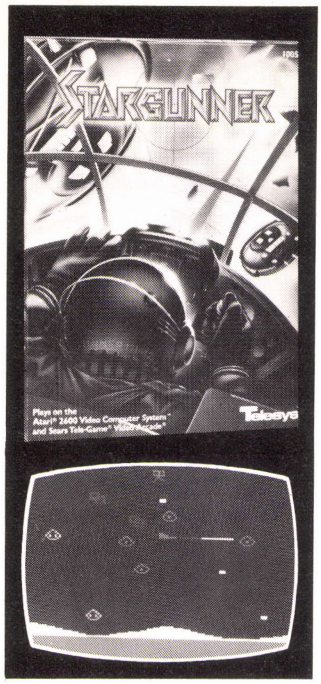
It's difficult to mount the necessary drive to win when the theme is reminiscent of Intellivision's Electric Company cartridges. The programmers should have used Tron's identity disc to batter away at the MCP.

On the plus-side, I've got to admit I was knocked-out by the way the programmers recreated Wendy Carlos' electronic score for the Solar Sailer sequence of the film. It's virtuoso work, though I wish I could say that about the rest of the game.

J.C.: E.C. understates the excellence of the audio: it's *so* good that you're liable to ignore the characters talking to you in this Intellivoice cartridge.

Tron: Solar Sailer is another of Intellivision's efforts to give consumers what neither Atari nor Coleco offers: longplaying, multifaceted games for adults. While I agree that this cartridge has its flaws, which E.C. well-summarized, the Intellivision owner will find it an unusual and interesting addition to her/his cartridge library. I wouldn't advise purchasing it at the expense of *B-17 Bomber* or *Bomb Squad,* but it's a solid game which requires patience and thought more than a quick trigger finger.

As for the literal use of the digits in the MCP phase, I think E.C.'s complaints are absurd. The whole game is a fable; players will accept the numerals as a necessary shorthand, one which adds an interesting dimension vis-a-vis their use in the code which breaks the MCP.



StarGunner

Object

A deadly alien squadron — what else? — is attacking the Yarthae Empire. Flocks of lethal Sphyzygi are being dropped from the skies by the robot Bobo, who cannot be destroyed.

The player guides a ship from left to right while blasting the enemy from the nighttime skies.

E.C.M.: One look at the screen from this game tells the tale: *StarGunner* joins the ranks of *Space Jockey, Flash Gordon, Freedom Fighters,* et al, as another voice in the *Defender* chorus.

With one difference, *StarGunner* runs neck-in-neck with *Chopper Command* as the best of the 2600 lot.

The sound effects and gunner-action are the closest yet to the arcade *Defender,* and the Sphyzygi — particularly the overlapping squares, which closely resemble *Defender's* Bombers — are graphically dazzling.

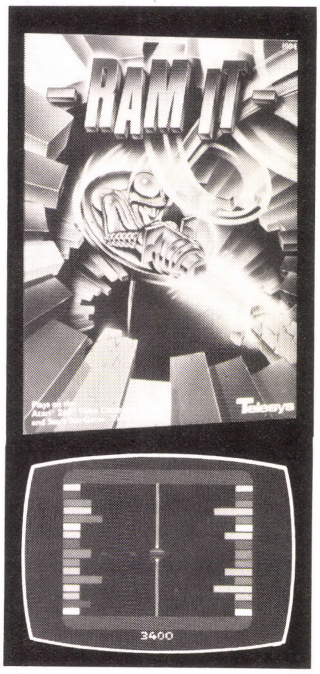
Gameplay is fine, with one drawback: the player cannot reverse directions. However, with decelerate and accelerate capacity, this is not sorely missed.

It's pretty late in the day for this kind of game, and the glut of horizontal blast-'em cartridges may hurt Telesys — which would be unfortunate, since this cartridge belongs in your 2600 home library.

J.C.: This is one videogame where the programmers didn't try to do everything, but what they did they did extremely well.

As the screen becomes increasingly cluttered with Sphyzygi, you will not mourn the loss of the right/left firing capacity. Shooting left-to-right will be more than a handful.

Otherwise, I am in total accord with E.C.: graphics are excellent, sound effects very impressive — even to the strains of Beethoven which open the game — and the cartridge, overall, the prizewinner of the *Defender* corral.



Ram It

Object

There is one pellet-firing Ramroid on a vertical track in the center of the screen. To either side are sixteen color rods. The rods extend horizontally toward the center while the Ramroid is used to blow them away.

The rod cannot return to annoy you once it has been shot from the screen.

J.C.: A very impressive game for the 2600. Some players may find it dated — ie, it harks back to the "ancient" days of *Breakout,* with a nondescript paddle/gun flinging Pong balls at color blocks. Telesys *could* have overcome this stigma with fancier graphics.

Regardless, *Ram It* is a harrying game in that you must beat the thirty-two bars before the clock runs out and/or you are snugly trapped between them. Strategy is important, since you can't just routinely clear one side and then the other: there isn't time (unless you master the fine art of hitting the bars in such a way that one bullet hammers back two at once).

Well-worth owning, and good for the entire family.

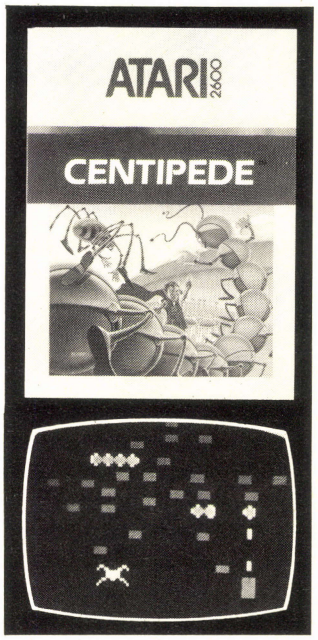
E.C.M.: Hectic, yes, and very good in terms of gameplay, yes. But *Ram It* suffers from terminal blandness.

First, there is no real personality. Increasingly, consumers are demanding that videogames have characterization, and while identifiable figures alone won't carry a game — witness the flop of *E.T.* — it helps. It's the difference, for example, between *Venture's* delightful rogues in the ColecoVision incarnation vs. the boring blocks which scurry about the 2600 edition.

Too, videogamers want more than horizontal/vertical *Pong.* Remember Atari's *Warlords?* That game's cursor sizzled around the screen when hit, bouncing in every conceivable direction.

When you analyze the two, *Ram It* is the same game as *StarGunner* without the fanciful ambience. I find it at once interesting and terribly annoying that Telesys, apparently recognizing this lack, tried to cram their instruction booklet with "personality." Sadly, the persona they chose swings from feathery "Valley Girl" ("Play it to the max . . . ") to buoyant idiocy ("A looney 'lectronic tune," and "Bash the bonus bar!"), thus failing to provide the game with any additional weight.

Despite these criticisms, you *will* enjoy *Ram It.* Certainly it's far, far superior to the very similar 2600 catastrophe *Squeeze Box* from U.S. Games. However, with a little more forethought, Telesys could have elevated a good game to a great one.



Centipede

Object

A multisegmented insect wriggles from one end of the screen to the other, descending as it strikes either the side or one of the many mushrooms which litter the course.

Your task is to blow away the creature's bodily parts, one by one, before it strikes your gunbase at the bottom of the screen. Each blasted segment becomes a mushroom, which hastens the descent of the centipede which follows.

There are also spiders, fleas, and scorpions which bob above or descend upon your gun.

E.C.M.: I promised myself

I wouldn't compare this 2600 edition of the arcade game to its 5200 counterpart, and I won't. Actually, there *is* no comparison. The latter version is brilliant. This one is — well, it's merely good.

Atari has done a fine job capturing the *feel* of the game in the 2600 format. The rapid-fire is there, the sound effects are there, the vertical and horizontal mobility of the gun is there. Consumers being introduced to the game for the first time will find it quite pleasing.

However, *Centipede* buffs will be frustrated. What's missing is the *look* of the game. For one thing, the mushrooms aren't mushrooms, they're squares. And you don't blast them away in pieces: you've got to hit them three times, after which they simply vanish.

The gun is also just a block, and the centipede actually disappears from the screen for a second or two every now and then, as if all the activity is just too much for the computer's memory to hold.

As I said — good, but nothing more.

J.C.: Comparisons with other versions *are* pointless, since it's *this* edition for which you're laying out your money. Arcade buffs have come to understand that the 2600 isn't a three thousand dollar standalone, so there are going to be compromises. In this instance, Atari was wise to sacrifice some of the graphics in order to recreate the thrill of the game. And, that being the case, I highly recommend this cartridge.

First, my one complaint: the gun *is* rather bulky and difficult to slide amongst the mushrooms. Otherwise, with its progressive pace and crowded playfield, this is one of the fastest and most entertaining 2600 cartridges you can buy.

Space Fury

Object

The evil Alien Commander has challenged earth in battle. The invader's scout ships swoop down and around you. You must maneuver your wedgeshaped ship to blast the swarming intruders from the sky.

Complete one wave, and you are allowed to dock with a weapons collar, one which permits you to fire in multiple directions simultaneously.

The animated face of the Alien Commander appears at the beginning of the contest with the dare, and at the end with an evaluation (usually snide) of your performance.

J.C.: *Space Fury* gets my thumbs-down. I didn't like it in the arcades, and I like it even less here. On a purely aesthetic level, the ColecoVision console is capable of far, far more than a rehash of *Asteroids*.

And it's on the market for no good reason. *Space Fury* was not that popular a game in the arcades.

Nonetheless — it's here, and if you like spinning, shooting, and accelerating, this cartridge will hold your interest for a while. In and of itself, the cartridge is good; however, it doesn't embellish *Asteroids* et al sufficiently for me to recommend it.

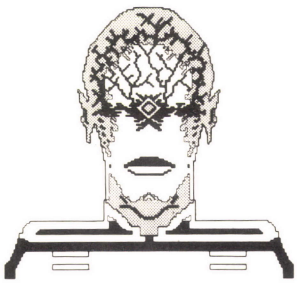
Space Fury is all reflexes and no mind, not only saddling ColecoVision with a derivative taint, but slapping egg on its face for failing to live up to the computer's potential.

E.C.M.: Of course, it hasn't occurred to Jim that if you only have ColecoVision, you probably don't own *Asteroids*. Every home should have one; it's good for the spirit.

In its ColecoVision incarnation, *Space Fury* is, in fact, more than just an *Asteroids* clone. The player can guide his/her earth ship in far more intricate patterns, thanks to the more detailed graphics and better controls. To wit, you can effectively do "figure-eights" across the screen if you want, whereas etching a straight line from side to side is the most you can expect from *Asteroids*.

The detail in the onscreen elements is also an improvement, the geometric shapes of the alien attack ships/weapons and glittering explosions thrusting the game to levels of realism unknown to "*Asteroids* et al." And the appearance of the Alien Commander puts a face on the enemy, something which gives it an appealing *Space: 1999* quality.

Jim has some valid complaints about the genre. However, that's like condemning licorice ice cream. If you hate it, even the fanciest sundae isn't going to appeal to you. If you like it, *Space Fury* is a triple-scoop hot fudge delight.



Air Raiders

Object

You're the pilot, gunner, and navigator of a World War II fighter plane. Your objective is to engage enemy squadrons, avoiding flak, keeping an eye on your fuel and altitude, and being sure that you don't run out of ammunition.

The game allows you to land and refuel — though that will cost you ammunition. When your store of bullets goes dry, the game is over.

J.C.: This is Mattel's M Network version of their brilliant Intellivision *B-17 Bomber*, and it's one of the best games you can buy for the 2600. It's the game *River Raid should* have been, a masterwork of the programmer's art.

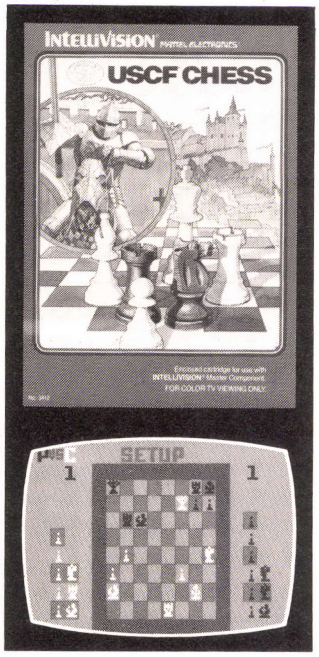
You taxi down the runway, control your takeoff, and search the skies for enemy planes. When you find them, they zip past; you must use the joystick to adjust your altitude and pitch in order to stay with the ships, sight them, and shoot them down. The horizon moves as you tilt one way or the other, and the simulation of being in-flight is excellent.

Air Raiders is *Star Raiders* on earth, an easy-to-learn

but endlessly entertaining and challenging cartridge. I fear it won't get the press coverage or recognition of the fantasy-or science fiction-oriented games, which is a pity: it's state-of-the art entertainment for the 2600.

E.C.M.: This really is an extraordinary cartridge. Players who are accustomed to the colorful, cartoon-like graphics of a *Demon Attack* or *StarMaster* will, as Jim suggests, find this gunmetal-flat. The colors are subdued, though the graphics are excellent. The constant tilting of the horizon, coupled with the sleek enemy fighters and their flitting, bobbing motion through the air really do turn the joystick into a throttle.

The 2600 isn't a 5200 or Intellevision or Coleco-Vision. But for those of you who want to see the 2600 at its playable, evocative best, *Air Raiders* is for you.



USCF Chess

Object

The old strategy game, and still the best: you move sixteen pieces around a checkered board to capture your opponent's king. You can play against a human opponent or match wits with the computer.

Other options include: retracting completed moves, forcing the computer to take its move, switching around the board for views from another side, and eight levels in which the computer will take from seconds to hours to make a move.

This Intellivision version is approved by the U.S. Chess Federation.

J.C.: Chess comes to Intellivision at long-last, and it's been worth the wait. Not only is the board displayed, but the captured pieces as well, along with two clocks which keep track of how long each player has cumulatively taken to make their moves.

The level I find most fascinating as an observer and tactician is one in which you arrange the board and the computer tries to checkmate you in the least number of moves. You can understand everything there is to know about computers, yet still be fascinated as this mass of circuits collects itself to match (and usually humble) your own abilities.

Other chess games, such as the Atari 2600 cartridge, offer many of the same options. However, this is the first time so many variations *and* excellent graphics have been packed into one game.

E.C.M.: *USCF Chess* is, indeed, a perfect game for chess buffs. Where Intellivision missed a bet, however, was in failing to publish instructions for the beginning player. This cartridge would have been a marvelous place for youngsters to learn chess on their own, but that isn't possible.

A minor complaint: the player is charged for the extra seconds it takes to move because of the clumsy nature of the Intellivision disc controller. This is an inherent and bothersome problem.

Swords and Serpents

Object

A noble knight must regain every blood-soaked inch of a monarch's kingdom, stolen years ago by an awful dragon. Teamed with the Wizard Nilrem, the Warrior Prince must seek hidden treasures, earning valor points; battle Phantom Knights and the wicked Red Sorcerers; locate a key on each of the four levels of the dragon's fortress; study mystical scrolls to learn the secrets of the fortress and thus empower Nilrem with additional magic; and, finding the dread serpent, destroy it.

Each knight has nine lives.

Nilrem appears only in the two player versions of this Imagic game for the Intellivision console.

E.C.M.: Dragon games may come and go — you'll remember we covered them at length last issue — but I've yet to encounter a game which packs the punch *and* matches the playability of Atari's 2600 classic *Adventure.*

I'll make this very simple: if you like needlessly complex fantasy games in the Dungeons and Dragons milieu, you'll voice a hearty "tra-la-la!" For me, the sword of complexity cut the other way: I did not like having to stop the action, search *both* keypads for the correct button — there's a different overlay for each controller — read a scroll or check my inventory of treasures, then resume the quest.

In the two-player game, with the role of the wizard assumed by another player — the computer doesn't handle Nilrem — a fulfilling sense of comaraderie develops, presuming the individual with whom you're playing doesn't foul up and cost you a life.

The fortress is a giant maze littered with reward and danger. But the knight moves too slowly, and the audio footsteps grated on me after a while. The graphics are mixed: the scrolling of the maze, the dragon, and the knight are excellent. The warrior is seen from above, swinging his vorpal blade in 360 degrees. But the treasures, scrolls, etc., are not detailed and fail to enhance the game.

Imagic's *Dragonfire* is more my speed.

J.C.: Oddly, I found *Swords and Serpents* not complex *enough!* You're landlocked in a very dull maze, one which is far less intriguing than the far-reaching map of *Advanced Dungeons and Dragons,* Intellivision's game.

For young adventurers, *Swords and Serpents* is a good choice. It teaches cooperation and, because it *is* a slow game, logic.

I agree with E.C. that, excepting the knight, dragon, and scrolling maze, the graphics are a disappointment. I found the blob-like wizard particularly undistinguished. If the choice is between this game and *Advanced Dungeons and Dragons,* I, too, would have to give the nod to the latter.

Continued on page 70

golden pons

Test your videogaming knowledge.

1. Each of the home videogames in the following groups are related by similar gameplay — all except one. Identify the sore thumb cartridge in each batch.
   A. *StarMaster* (Activision)
      Star Raiders (Atari)
      Phaser Patrol (Starpath)
      UFO (Odyssey)
   B. *Kaboom* (Activision)
      Demons to Diamonds (Atari)
      Lost Luggage (Apollo)
      Coco Nuts (Telesys)
   C. *Space Invaders* (Atari)
      Space Chase (Apollo)
      M.A.D. (U.S. Games)
      Threshold (Tigervision)
   D. *Chopper Command* (Activision)
      Defender (Atari)
      Space Jockey (U.S. Games)
      Cosmic Ark (Imagic)

2. Identify the following one-word Atari 2600 (4), Odyssey (2), Activision (2), Imagic (1), Coleco (1), and Intellivision (1) home videogames based on the few letters provided.
   A. _R____N_____
   B. _I___
   C. T_____R_____
   D. _A_L_____
   E. ____F_
   F. _E____P____
   G. ___O___I_
   H. S_____E____
   I. _A____U_
   J. ___TE_____
   K. _____S___R

3. True or false: test your videogaming knowledge about cartridges for the 2600, Odyssey, Intellivision, and ColecoVision.
   A. *Tunnels and Trolls* is Intellivision's second dragon game.
   B. U.S. Games, Intellivision, and Coleco are the three companies which have released horse racing cartridges.
   C. *Frankenstein* and *Dracula* are the only home videogames based on classic movie monsters.
   D. The Intellivision *Pitfall* is virtually identical to its 2600 counterpart.
   E. The cartridges based on *E.T., The Empire Strikes Back,* and *Raiders of the Lost Ark* all open with the theme music from those films.
   F. *Fast Food* from Telesys is the only junk-food home videogame.
   G. Parker Brothers' *Sky Skipper* is the only home videogame with a duck.
   H. Coleco's *Carnival* is the only home videogame with a rabbit.
   I. *Out of This World* allows the player to visit the moon, Mars, *and* Jupiter.
   J. *Shark! Shark!,* the upcoming *Jaws,* and *Sea Quest* are the only home videogames which feature sharks.

The suspense is over. You can breathe once again. For here are the answers to last issue's puzzles:

1. Spinners, *Astroblast;* Megalytes, *Encounter at L-5;* Nitro Ed, *Gangster Alley;* MACC, *StarMaster;* Zakor, *Star Voyager;* Mobots, *Zaxxon;* Tanis, *Raiders of the Lost Ark;* Spider Warriors, *Flash Gordon*

2. STORE SAID is *Asteroids;* REND FEED is *Defender;* DEEP MATS is *Stampede;* FUN AS is *Snafu;* PUNS MARE is *Superman;* PICK NOAH is *Pachinko;* THESE MINERS is *Smithereens;* TIDE PENCE is *Centipede;* BALD GUY is *Ladybug;* POUR MEATS is *Mousetrap;* TAIL ANTS is *Atlantis*

3. a. "It's *my* crow, sir; generally, I allow it to fly where it desires." ("my crow, sir; gen" is *Microsurgeon*)
   b. "I tend to overreact, orderly, when patients are not carefully attended!" ("react, or" is *Reactor*)
   c. "Knights: talk or fight, but don't do both!" ("Knights: talk or" is *Night Stalker*)
   d. "I watch opera; come and enjoy it with me." ("ch opera; come and " is *Chopper Command*)
   e. "Old rags torn to pieces make great kite tails." ("d rags tor" is *Dragster*)

4. 1. *Super Challenge Football*
   2. *NFL Football*
   3. 5200 *Football*
   4. RealSports *Football*

facetiae

The column which dares you to identify six popular home videogames based on the following verse.

I
A rarity! A game, my dears,
Which most have yet to play.
Atari-made, but just Sears-
Sold, the characters all neigh.

II
In the air's where you should be
As left and right you dash.
Watch that balloon, watch that tree
Or you are sure to crash.

III
This serpent foe is big and
Mean and keen to guard its cache.
It tries to fry the brigand
Who across the moat does dash.

IV
Got a sweet tooth? Feast for free,
As food and drink abound.
You may well gain a cal'rie,
Though you'll never gain a pound.

V
Sausage is the subject here,
But not like you would eat it.
A shaggy figure's also near;
The object is to beat it.

VI
We came, we played , we bowed
Yet there's one more little feat:
To fight through the madding crowd
To attain our limo seat.

Answers: I: Steeplechase; II: Skyjinks; III: Dragonfire; IV: Fast Food; V: Oink! VI: Journey/Escape.

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arcadia

RAIDERS OF THE LOST ARCADE

"The Ones That Got Away"

by Richard Meyers

The amusement palaces are full of families. Not only human families, enjoying the pleasures to be found in computer-animated video machines and electronic pinball games, but cartoon families. There is the Donkey Kong family and the Pac-Man family, multiple *Zaxxon* and *Defender* games, among others.

But in every family there is always the black sheep, the skeleton in the closet. In their struggle to capture the public's imagination, game manufacturers have created some of the strangest entertainments ever to eat quarters.

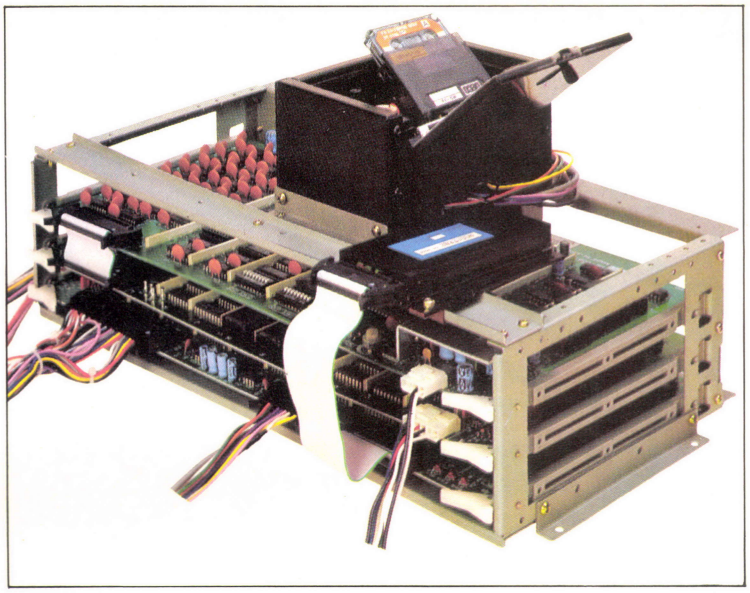
Veteran arcade explorers might remember video pinball, video bowling, video shuffleboard, and even the astonishing *Electronic Yo-Yo*. This is the saga of other attractions which, for one reason or another, were wash outs, failures which were quickly dropped on the video scrap heap.

To find out what some of the greatest of these "lost" games were, and why they flopped, our first stop is one of the oldest amusement companies, Rock-ola.

The Eyes Have It

Since the 1920s, Rock-ola has been in the forefront of game innovation. They were the company which created the first public scale that not only gave one their proper weight, but told their fortune as well.

Rock-ola also made the first slot machine that actually shelled out cash. Before then, a human operator would reward winners. And while the company is still well known in the 1980s for its jukeboxes and vending machines, no one seems willing to believe in Rock-ola's videogames.



The almighty coversion kit can replace a dying game with a new one in hours. Above is the Data East Multi Conversion Kit with PC boards, cassette deck, control panel graphics and more.

"This irritates me badly," declares Betty Lockhart, Donald Rockola's assistant. "Our problem is that we're just not known in the game field. Amusement arcade operators say 'What do I want to try your games for? You make phonographs.' In some of those cases, I'll send them one of our machines just to show them we make videogames with the same quality as our other machines. If they don't like it, they can send it back. Well, I'll tell you; I've never gotten one back. We make a game too good."

Players of their moderately successful *Fantasy* and *Jump Bug* games can attest to that, but whatever happened to *Eyes?* This was a 1982 maze shooting game where the player would zap mazes laden with different symbols while enemy eyes would suddenly appear and disappear to do the player in. If two eyes touched or an enemy eyes' death ray blasted the good eye, the game was over.

Lockhart attributes its failure to hit the big time on arcade ignorance.

"*Eyes* is a good game that is still making money, but it was an absolute struggle to get onto the market. We had a hell of a time getting it around the country and making people believe that we were really in the game business. But we certainly haven't been hurt the way other companies have.

Light My Helifire

Nintendo Leisure System Company hasn't been hurting ever since the introduction of *Donkey Kong.* That game broke through to superstardom stature. But before Mario and the monkey were born, Nintendo watched in anguish as three of their beloved games dropped into the video sea without causing a ripple. This trio was truly ahead of their time.

"*Helifire* and *Radar Scope* both came out in 1980," reports Susan Schoenecker of Nintendo. "They didn't test too well in the marketplace so we really didn't put them out." The former game placed the player in the cockpit of a missile-belching, 'copter, while the latter pictured a green radar grid along which enemy spaceships and space mines bombarded the craft the player controlled.

Although those two games were merely decent additions to the arcade, Nintendo held high hopes for *Sky Skipper,* one of the first of the "cartoon character" games. *Donkey Kong,* of course, broke that market wide open, but before *Sky Skipper,* most video machines presented deadpan adventures of alien attack. Nintendo's third "lost arcade" game was as whimsical as it was winning. And it featured another big ape.

"You're trying to hit gorillas who hold captive little creatures who look like card insignias," Schoenecker explains. "You know, hearts, spades, diamonds, and clubs. They are trapped, but if you shoot the apes with the plane you're controlling, the card creatures are released. And if you do it in such a way that you create a 'flush' or 'full house' or other kinds of card game hands, you get bonus points."

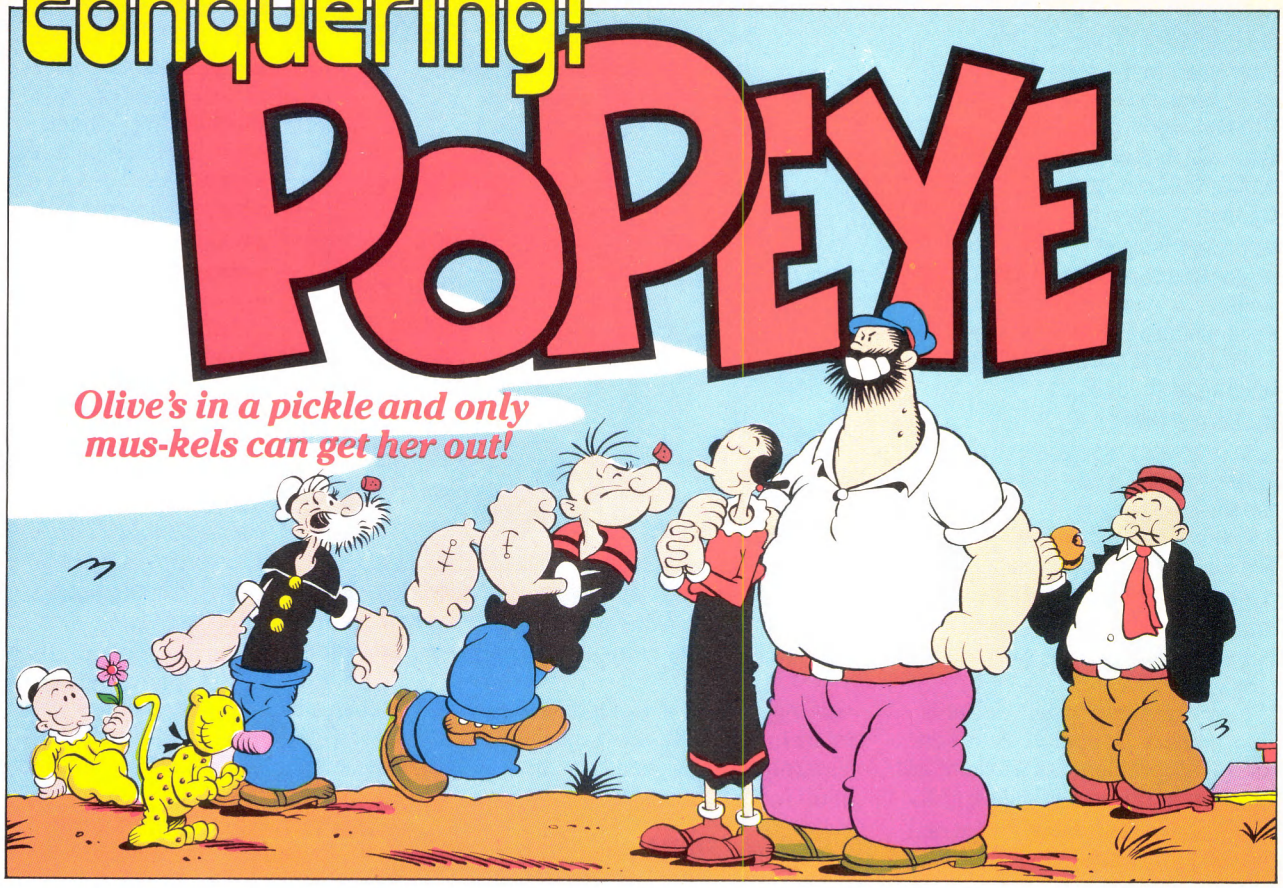
But that's not all, folks. *Sky Skipper* was full of nuances, or "tweaks", as they are sometimes called in the industry, that made its failure in the marketplace all the more perplexing. "There were all kinds of obstacles in the game," Schoenecker remembers. "Like clouds that would make you crash if you hit them, and diminishing fuel supplies, and castle walls to avoid. It was a fast-moving, amusing, sophisticated game."

Although the 'coin-op' game didn't make it, Parker Brothers is releasing *Sky Skipper* as a home video cartridge. Nintendo may have the last laugh after all. Although *Sky Skipper* was

Continued on page 67

Tron ***and*** **Pac-Man** ***are games whose success doomed other games to the video trash heap. Just as in matters of love, timing is all.***

conquering: POPEYE



ART BY BILL DuBAY © 1983 KING FEATURES SYNDICATED

by Randy Palmer

Conquering Popeye?

Up to a few months ago, that was inconceivable. Popeye *always* outslugged Brutus (Bluto, in the older cartoons) and won the heart of his "goil," Olive Oil.

But Nintendo has brought us a new Popeye: one who can be eluded and even thrown overboard. Only by conquering *Popeye* can the player restore Popeye to his former glory.

Popeye uses the same controls as Nintendo's early classic *Donkey Kong:* a four-directional joystick and an action button. In *Popeye,* the action button causes the character to throw a punch as well as reach for the can of spinach which appears on each of the game's three screens.

In Screen One, Popeye must catch hearts tossed into the air by Olive Oil before they sink out of sight in the river below. In Screen Two, Olive pitches musical notes, and in the last screen Popeye's task is to build a ladder to Olive's level by catching individual letters which spell out the word "help." Each letter that is gathered adds one rung to the ladder.

Besides Brutus, Popeye's foes are a Sea Hag who attempts to clobber the sailor with bottles (she uses skulls after completion of Screen Three) and a Vulture which makes its debut in Screen Three.

Screen One

Popeye appears on the top ledge on the left side of the screen. Play begins as soon as Brutus dashes in from stage right and then jumps down to the second ledge.

Begin by shifting the joystick back and forth rapidly, causing Popeye to do a series of about-faces while Brutus looks around dumbly and moves left and down the staircase. By this time Olive will have thrown out her first heart.

Immediately move Popeye to the left; he'll use the "around-the-screen throughway" and appear on the opposite top-most ledge. By moving him to the very edge of the platform, he will automatically catch a heart. By now Brutus will be standing directly in line with the barrel hanging overhead. Pressing the action button at this point will cause Popeye to hit the punching bag, which will dislodge the barrel, which will drop directly on Brutus' head.

This opening gambit will net the player a total of 2,550 points as follows: five hundred for capturing the heart; fifty for punching the punch bag, and two thousand points for dropping the barrel successfully on Brutus.

Remember, however, that not every heart captured is worth five hundred points. Only those captured along the top ledge (on either side of the screen) are worth that much. Hearts captured along ledge two are worth three hundred points; those on ledge three, one hundred; and any hearts saved from sinking into the water at the bottom of the screen are worth a mere fifty points. Try to catch as many hearts as possible along the top two ledges for maximum point gain.

The above heart values are doubled whenever Popeye scoops them up after grabbing a can of spinach.

Hearts which reach the water will begin sinking. Hearts in jeopardy should be rescued from drowning as soon as possible since one game life will end whenever a heart sinks completely.

Avoiding Brutus is a major undertaking. He has the ability to jump up and knock Popeye off the level above

(scratch one Popeye); he can also reach down to a lower ledge and knock Popeye out. Brutus will occasionally jump to a lower ledge to attack our hero. Popeye is unable to do this; he must use the stairs at the sides of the screen.

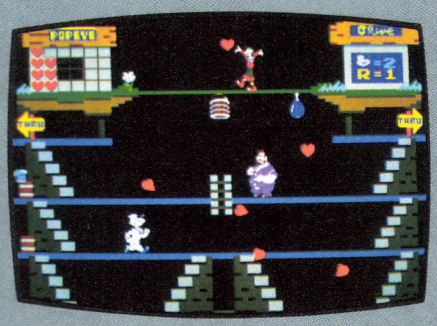
To avoid Brutus' tricks, watch the expression on his face. Any time he is about to jump up or reach down, his eyes will look up or down accordingly, moments before he attacks. Players should move Popeye away from Brutus whenever this occurs.

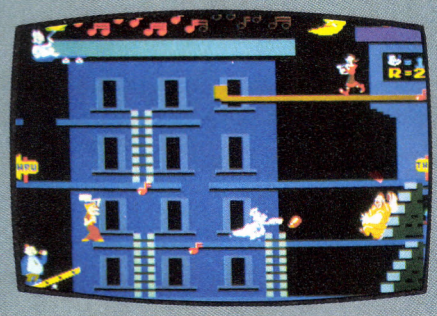
Brutus will also toss bottles at Popeye. These must be punched; a Popeye-life will be forfeited should a bottle touch him. Brutus usually throws four bottles at a time, then runs after Popeye. But beware of the Sea Hag who appears at the sides of the screens and who also throws bottles. At times the player will be attacked by both enemies at the same time, from *opposite* sides of the screen. In such an instance, the player must be prepared to react swiftly. Knock out whichever bottle is closest, then quickly shift the joystick to face Popeye in the other direction to destroy the bottle coming at him from that direction. Then return Popeye to face the oncoming bottles still being tossed from the opposite side. Surviving such a dual attack takes some practice, but a quick joystick will enable the player to survive. Fortunately, the Sea Hag will throw only one or two bottles for every four which Brutus throws.

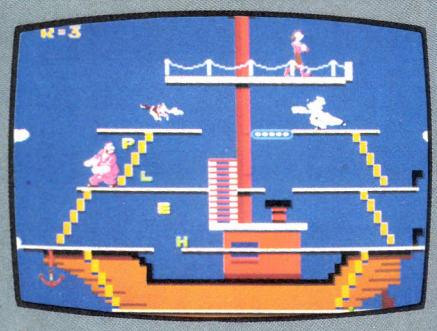
If you feel bold, position Popeye face-to-face with Brutus when he is at a screen edge. He will continue to throw bottles at Popeye — many more than four at a time — and your score will climb accordingly. At the same time, however, don't forget the hearts which are floating slowly away!

The can of spinach which appears on the screen will enable Popeye to turn the tables and attack Brutus. The spinach always appears at the top of a staircase. Reach for it by pressing the action button. As soon as Popeye has the spinach, all hearts are frozen into position; they're no longer in free-fall. While Popeye has the spinach, Brutus will try to escape by running up and down to different platforms. Chase after him, picking up the double-point hearts along the way. Punching out Brutus will increase your score dramatically. The player can also use this time (which is limited; keep an ear peeled for the concluding notes of the *Popeye* theme) to pick up sinking hearts, or race to the top levels to reach frozen hearts which are worth more points.

Once Brutus has been knocked cold by Popeye, he plummets into the river. It takes a few seconds for him to climb back out and begin the pursuit once again, so take this opportunity to grab hard-to-reach hearts.







Nintendo's* Popeye *features the most authentic and crisp graphic adaptation of existing characters to date.

Screen Two

Like the hearts in Screen One, the musical notes Olive tosses out in this screen must be rescued by Popeye before they, too, sink out of sight.

Popeye will drop through any gaps in the ledges without harm. Brutus, on the other hand, can walk across these gaps, or jump up or down to various ledges in his attempt to foil Popeye's mission.

Popeye can, of course, ascend and descend ladders in Screen Two. However, he *cannot pause* on a rung on any vertical ladder. He will move completely to the top or bottom of vertical ladders at the touch of the joystick.

The notes which Olive tosses out will automatically be absorbed by Popeye should they drift into his body; but some will bounce off the sailor's body. Whenever this happens, press the action button to allow Popeye to reach out and grab the elusive note.

Strategies involving Brutus' throwing of bottles (as well as those thrown by the Sea Hag) apply here as in Screen One.

At the bottom left-hand corner of Screen Two is a springboard. This is the only feature of Screen Two which will allow Popeye to return to the top of the screen. That is because gaps along the platforms are placed in such a way that Popeye cannot climb to the top via ladders after he has dropped below a certain ledge.

To take advantage of the springboard, simply move Popeye off the lowest ledge. He will spring high into the air. If Popeye touches the floating baby, Sweet Pea, the player will be awarded a bonus of five hundred points and Popeye will be perched on the top-most ledge. If he has the can of spinach when performing this maneuver, the bonus is doubled to one thousand.

If Popeye fails to touch Sweet Pea, he lands on the next lowest ledge.

Brutus, it should be noted, can use the springboard as well. If he is in close pursuit of Popeye, climb down a ladder and move away quickly lest Brutus jump down and push Popeye into the water. Use the springboard only when Brutus is a safe distance away.

One other precautionary measure: if Brutus has begun throwing bottles, don't use the springboard. Popeye's jump will crash him into the line of bottles as they pass overhead!

Screen Three

This screen, featuring a battered ship, is filled with ladders, gaps along ledges, and a moving platform at the top-most ledge which can either help or hinder the sailor.

Popeye's task this time is to capture alphabet letters (H, E, L and P) as they float from top to bottom. Once again, any letter not captured by Popeye will begin sinking at the bottom of the screen and, once sunk, so is Popeye.

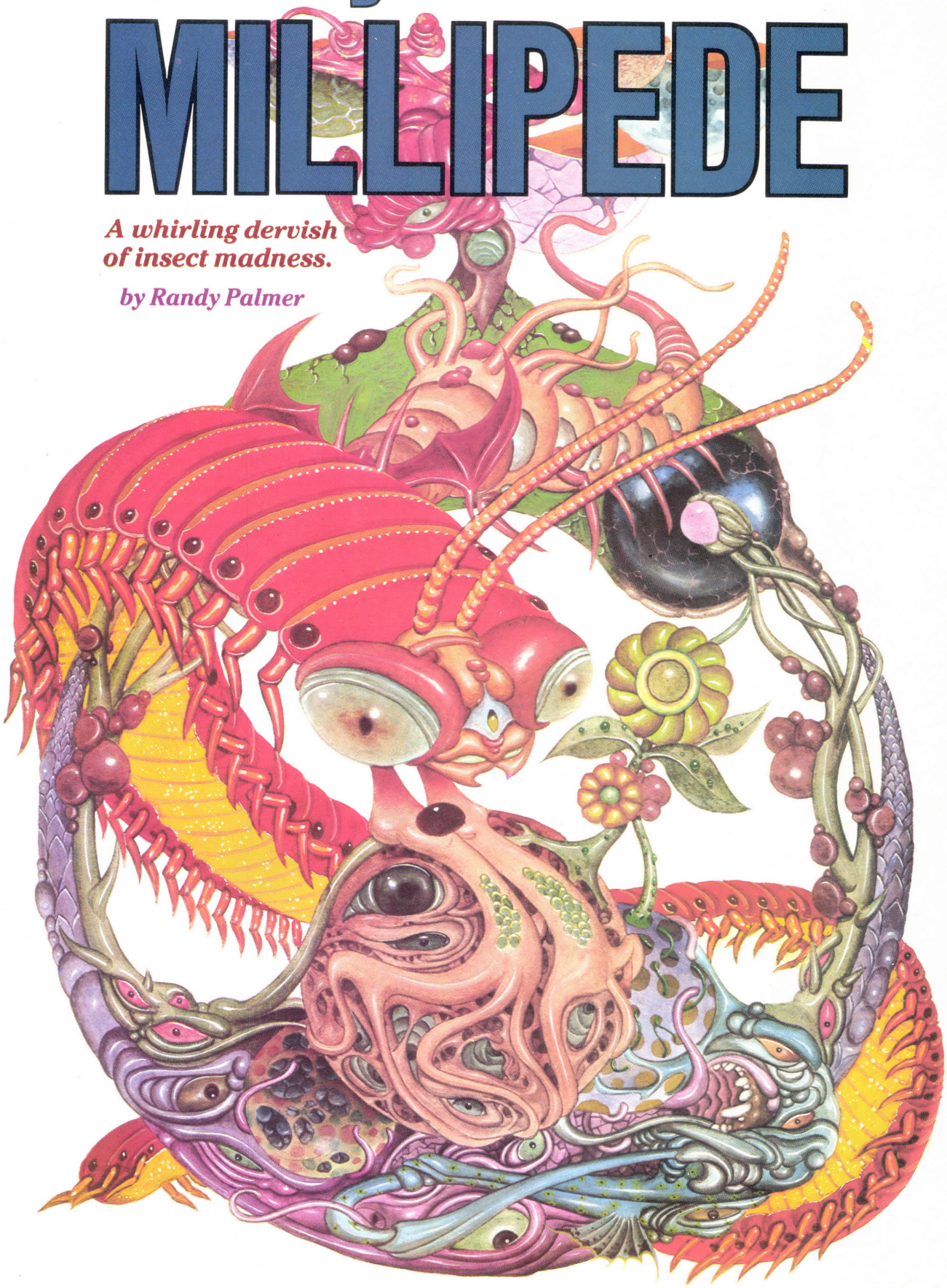
Begin by scooting Popeye back and forth on the moving platform. He'll be able to absorb several letters fairly rap-

Continued on page 68

conquering: MILLIPEDE

A whirling dervish of insect madness.

by Randy Palmer



ART © 1983 ALEX NINO

In an arcade, nothing is as it seems. Even a precious, harmless, and furry ecological wonder like a millipede, in an arcade, becomes a sinuous, rampaging engine of destruction capable of wearing even the most skilled player down to a frazzle.

Ladies and gentlemen, I give you *Millipede.*

Millipede retains the basic objectives of Atari's *Centipede* game, but has added a host of new enemy creepy-crawlers to infuriate the avid videogame player, and the action is programmed to be faster and more furious than before.

Seasoned *Centipede* players may find that some of the strategies that work on that game also apply to this sequel. But some don't. Setting up specific mushroom patterns, for example (the object being to cause the millipede to follow a specific course down the screen), can work; but enemy targets not found in *Centipede* (e.g., the dragonflies) will upset the player's plans for creating certain beneficial mushroom patterns.

Points

Mushrooms are still worth one point each (as in *Centipede*). Likewise, the head of any millipede is worth one hundred points, while each body segment scores ten points per hit.

Also retained from the original game are spiders, valued at three hundred, six hundred, nine hundred and twelve hundred points each, depending on how closely they approach the player's gun before being shot.

Millipede's new insect invaders are:

Earwig — one thousand points (earwigs poison mushrooms in this game as scorpions did in *Centipede.*

Dragonfly — five hundred points.

Mosquito — four hundred points.

Beetle — three hundred points.

Bee — two hundred points (bees perform the same functions as did fleas in *Centipede.*

Inchworm — one hundred points.

Additionally, whenever a DDT bomb is exploded, eight hundred points are automatically added to the player's score. (DDT bombs figure strategically during gameplay and are discussed in detail below).

Gameplay

Millipede features a device called "Skill-Step" which allows the player to begin a game with zero, thirty thousand or sixty thousand points. Obviously, beginning with any amount of points other than zero automatically raises the machine's difficulty level proportionately. The advantage to the player who begins a game with a bonus score already established is that it enables the player to more quickly reach high point levels at which extra guns are awarded. Since *Millipede* is an intense game anyway, I see little reason *not* to begin at the thirty thousand point level after a few games have been played at the zero point mark.

Like *Centipede, Millipede* begins with one "thousand-legger" scurrying across the screen and reversing its direction while dropping down one step each time it touches a mushroom. Each time the player succeeds in destroying all segments of a millipede, the following screen begins with the millipede divided into two segments; the next screen into three, and so on.

The scrolling firing zone is no advantage to the player since it constricts the area in which (s)he is able to maneuver the gun.

Unlike the original game, however, the player's firing zone is shaded gray — a well-defined area showing exactly how far up the screen the gun can be moved. Atari's trakball allows for extremely rapid deployment of the gun. Rapid-fire capabilities are claimed for the firing button, but of course this means that one bullet must hit a target (or move offscreen) before the next shot is triggered.

The firing zone also scrolls up one step toward the mushroom patch after each millipede wave. This is not really advantageous to the player since it constricts the area in which (s)he is able to maneuver the gun.

General Strategy

Keep the firing zone free of mushrooms. This will prolong millipede segments' lateral movement and delay the "side feed." For each segment not destroyed along the bottom line, a new segment is fed into the firing zone from either the left or right side. By picking off such segments before they hit bottom and begin an ascent to the top border of the zone, side feed can be avoided. Millipede segments destroyed in the firing zone (as well as on the main playfield) automatically change into mushrooms. Shoot away mushrooming millipede segments in the zone without delay.

To set up mushroom patterns, it is necessary to shoot away many mushrooms as gameplay commences (you cannot create mushrooms; only destroy them). This is more difficult to do in *Millipede* than *Centipede* since this game begins with a screen literally cluttered with mushrooms. Nevertheless, with delicate aim (you don't want to set off any DDT bombs by accident), players can create "passageways" down which the millipede will travel.

Since a millipede will reverse direction and drop a level each time it hits a mushroom, try to clear away mushrooms on the extreme left or right sides of the screen, leaving those in the middle intact. As the millipede reverses direction and moves to a side, begin picking off its segments. The player must have cleared a substantial portion of mushrooms all the way down the screen in order to provide a clear area in which to fire.

When only two or three segments are left, clear away the mushrooms on the side left by dead millipede segments; then pick off the strays which will be winding their way down the screen toward the firing zone.

Using the above described method, however, risks the possibility that the gun will be obliterated by a spider since spiders enter play from the sides of the screen. Another method to pick off millipedes (and at a faster pace) is to create a "tunnel" through which the millipede will rapidly descend. This involves shooting away a vertical path of mushrooms which are bordered by mushrooms to be left in place. As the millipede strikes first one mushroom, descends/reverses one step and almost immediately hits another, the insect will in effect descend in a straight line, allowing the player to keep the gun in one place while rapid-firing straight up.

Unfortunately, neither of these methods will sustain itself for very long, due to bee and dragonfly attacks. Bees are to *Millipede* as fleas are to *Centipede.* The major difference between these creatures in the two games is that, while fleas in *Centipede* will drop only when the safety or firing zone is low on mushrooms, *Millipede's* bees will, in addition to that, descend

in swarms at various intervals, thus negating any mushroom pattern the player may have painstakingly set up.

Supporting Cast

In dealing with *Millipede's* myriad monsters, players must not only have a firm grip on the timing and tactics of each insect, but also be prepared to dodge the game's assailants (which attack vertically, horizontally *and* diagonally) at a moment's notice. Good control of the trakball is essential. And keeping one eye on what's happening in the main playfield with the other patroling the firing zone will not only save many game lives, it will be a display of eye-muscle control worthy of Ben Turpin.

Spiders

Spiders are familiar to *Centipede* experts, and as in that game, the fast-moving creatures enter from either the left or right side of the screen, bouncing around the player's fire zone. Remember that a spider can never backtrack. If it enters from the left side, it will eventually vanish on the right — and vice versa. Your gun will be spared if, once a spider enters the playfield, you move the gun off to the side from whence the spider appeared. Unfortunately this limits the ability to move about the fire zone to eradicate the millipede (and anything else that flits across the screen).

Spiders will bounce up and down in place, and move diagonally. Try to shoot them as they bounce up and down. They move faster as the game progresses, so be prepared to outwit them as soon as they appear. Stay away from the extreme edges of the fire zone. Spiders, incidentally, erase any mushrooms they touch.

Earwigs

Like scorpions in *Centipede,* earwigs poison mushrooms as they travel in a lateral movement across the main playfield. Whenever a millipede body segment touches a poisoned mushroom, it will plummet all the way down to the player's fire zone, where it will then lose some speed and begin its usual back and forth movement, descending one step each time it touches the side of the screen or a mushroom. Earwigs should be disposed of on sight, especially when the player is at a level in which the millipede enters play already divided into individual segments.

Bee

An individual bee requires the same retaliation as does a flea in *Centipede.* As a bee drops vertically down the screen it leaves behind a trail of mushrooms. Two shots are required to kill a bee. But be cautious! The first shot a bee absorbs only angers it more and it will continue its descent even faster than before. A second shot will get rid of the pest completely. Avoid combating it near the fire zone. Its accelerated descent after the first shot may plunge it directly into your gun, thus destroying one game life.

Bee Swarm

As players reach higher point levels during play, *Millipede* will suddenly and unexpectedly unleash a "Killer Bee Attack." Destroy as many as possible, but above all protect the gun. A bee swarm will leave few, if any, mushrooms behind.

"Millipede *retains the objectives of* Centipede, *but has added a host of new enemies and the action is faster and more furious than before."*

Dragonfly

The dragonfly is another enemy which will leave mushrooms scattered around the playfield as it flits to and fro across the screen. Dragonflies, though relatively slow when compared to bees, are difficult to hit since they flutter about unpredictably. Their general pattern is a double-diagonal descent, never touching the sides of the screen. When possible, dispatch a dragonfly quickly. Their penchant for depositing mushrooms in such haphazard fashion is certain to abort any mushroom pattern strategy the player may have attempted to establish. If you're unable to destroy a dragonfly during its descent, be assured they are easy targets once they have entered the fire zone. If you still miss the pesky insect once it has entered the zone, simply move the gun away to either side. Dragonflies never fly laterally.

Mosquito Attack

Mosquitoes swarm by the dozens in *Millipede,* and they dive bomb in diagonal and reverse diagonal formation. Mosquitoes are fast-moving creatures and will plummet all the way to the bottom of the screen, invading the player's fire zone.

When under mosquito attack, hold down the fire button as the swarm approaches the lower third of the screen. Don't fire immediately upon sight of the swarm; you may accidentally ignite a DDT bomb. Rolling the trakball back and forth will net the player a number of mosquitoes, although the majority will escape. *Most* important, however, is to save that gun life. Simply move your gun away from a mosquito which enters the fire zone. Keep the gun near the top of the zone. It will allow more room to dodge the killers.

Beetle

Since the unassuming and innocuous millipede becomes, in the arcade realm, a stampeding creature of chaos and death, the player should not be fooled by the appearance of some of the minor characters in *Millipede.*

Just because a creature is frail or small or slow doesn't mean it can't rear back and sting you.

The beetle is a slow-moving creature. Even so, it can destroy the player's gun if (s)he is not careful. Beetles enter the fire zone, usually at the bottom step, from either side. Once a beetle has moved about one-third of the way across the bottom of the zone, it will turn abruptly and head straight for the main playfield. Unless threatened by a bouncing spider or some other insect, immediately center the gun below the beetle and dispatch it with one shot.

Should the player be distracted by side-feeding millipede segments, spiders or whatever, the beetle may escape into the lower portion of the playfield — where all the mushrooms are. Once a beetle touches a mushroom, that mushroom is changed into an indestructible flower — a barrier which the player cannot shoot away, no matter *how* many bullets are fired at it. The beetle can accomplish this with any mushrooms that happen to be lying about the fire zone, which is why players should always keep the zone clear of mushrooms.

The beetles' handiwork, the indestructible flowers, have the same effect upon millipedes as mushrooms. Therefore, while they are tiny and seemingly insignificant creatures, beetles should remain one of the player's primary targets.

Inchworm

Atari has also supplied players with a little creature called the inchworm, which makes its way across lower portions of the main playfield. An inchworm is an easy target, and though it's worth only a hundred points, once shot it slows the action of the *Millipede* game down considerably — for a while. The brief respite a dead inchworm provides allows players to shoot side-feeding millipede segments, clear away mushrooms — or just take a breather.

DDT Bombs

With any fresh screen in *Millipede*, a supply of precious DDT bombs can be found among clusters of mushrooms. One clear shot will explode a bomb, so it is important not to hit them accidentally, though much of the time this is unavoidable.

The DDT bombs should be saved for certain insects: bee swarms, mosquitoes' attacks. Full-length millipedes are the choicest targets. When exploded, a DDT bomb lets out a puff of pinkish smoke which will engulf and destroy any insect or insects which enter its gaseous cloud. Not only that, but exploding the bomb itself nets the player eight hundred points, and *triples* the regular point value of any insect which dies from the explosion!

Mosquitoes are the best adversaries to dispatch via a DDT bomb explosion. Since they are valued at four hundred points a piece *and* attack in swarms, catching a handful in the DDT bomb's cloud can net the player several thousand points.

Bee attacks (not lone bees) are also worth catching with the bombs. Third in rank are full-length millipedes.

But don't feel badly if you happen to explode a DDT bomb by accident. As stated before, even if it catches nothing, you've still gained eight hundred points. With that in mind, never waste any bombs. If only two or three millipede segments are still floating around the playfield, fire shots at any unused DDT bombs before finishing off the millipede. That way, you will gain those extra points. The screen which follows will supply you with a fresh batch of bombs.

And you will need every one to help you battle the wealth of hazards *Millipede* contains. But if you are feeling overwhelmed, do as the millipede and a certain long-deceased master strategist do . . . divide and conquer!

print out

E.C. Meade looks at books.

We've got an unusual situation this month, one which I'll live to regret.

I smiled when the publicity department at Bantam Books hoisted a quartet of silly little volumes across my desk. I smiled because they were bound galleys — uncorrected page proofs, typeset pages crudely glued between two undercoated orange covers.

I never feel guilty hauling bound galleys down to the local recycling plant, whereas disposing of neatly finished books always gives me pause. Even when the writing reeks like a container of yogurt you forgot was in the back of the refrigerator, the cover art is usually decent. Or else the local library may be glad to have it, since they're rarely very discriminating (they stock Sidney Sheldon and Judith Krantz, don't they?).

So I smiled when I picked up the slender volume labeled *Be An Interplanetary Spy #1: Find the Kirillian!*. Shortly, I knew, this work would be serving humanity in a more noble way, pulped and resubmitted to the public as napkins or postage stamps.

Let me hasten to interject that both of the aforementioned paper products have far more literary merit than *Find the Kirillian!* However — and the words weigh heavily, like Scrooge's undigested dinner — I have to recommend this book, along with its companion volumes, *The Galactic Pirate, Robot World,* and *Space Olympics.*

These books are being promoted as videogames-in-a-book. Young readers (ages nine and up) following the sparse text, negotiate mazes and many other puzzles, and then jump head to different pages depending upon the decisions they made. Those decisions result in furthering the adventure or causing the reader's demise. For example: confronted with the tennis racket of a giant alien (Venus Gerulaitis?), you must fold your rocket wings or perish. The book illustrates the various angles a reader can select, which is a good way for kids to learn some fundamental geometry.

The book is fraught with similar puzzles, all of which will cause readers to think — in spite of the oppressively dopey situations in which they are often couched, ie the alien tennis match, the hero trying to dress up as an alien Flodar ("You look more like a Gorond!" the text counsels), and so forth.

The art is crude and surprisingly amateurish and the layout is confusing. But there's a sense of discovery herein which young readers will find irresistible. Sure, I'd rather see them lose themselves in *Treasure Island* or *Tom Sawyer.* But, at the very worst, this series will encourage them to read.

At $1.95 per book, you can't go wrong.

input

Our readers write.

Pressure

My respect for your magazine rose significantly because of the comment on page fifty-seven of your April issue in which you declared that your reviewers would continue to give honest reviews of cartridges regardless of any threatened loss of advertising revenues.

That is the correct policy. It is unfortunate that some of the cartridge manufacturers feel they must resort to threats of ad removal on account of unfavorable reviews of their products. I could understand that attitude if your reviewers were being acrimonious or personally attacking a company or its personnel.

But the truth is that honest, well thought out and objective reviews — good or bad — can be and should be used by manufacturers as an aid in producing superior future products.

Apollo is a case in point. Is it not possible that if some honest, tactful person had told Apollo executives early on that their cartridges were inferior, they might have taken corrective action and now still be in business?

I think the answer is yes. I applaud you in allowing your reviewers to call them as they see them.

Larry Miles
Independence, MO

Satan's Spokeswoman

The April issue of your magazine was the first I had read. I enjoyed the majority of the articles, and your *Eye On* column had truly superior preview coverage. You've scooped your competition several times in that column alone.

However, there were a couple of items in the issue which cast serious doubts on your editorial credibility.

First, your Vista Awards. How could *Major League Baseball* for Intellivision be omitted from all categories, especially sports games? This game is considered by most to be one of the system's major selling points, yet you people chose to ignore it. Rather incredible.

Second, your *Preview* column. Some of Ms. Meade's acerbic comments indicate that she is totally out of touch with the state of the industry. What is it, Ms. Meade, that you have against Coleco's *Zaxxon?* Coleco has built in a richness and texture unparalleled in home games to date; that Meade describes it as "distractingly overdressed" shows either ignorance, a jaded attitude, or both.

I realize that everyone has a right to his or her own opinion, but I offer two points in support of my criticism of Meade:

1. Two of your major competitors have indicated that, in their opinion, *Zaxxon* is the best cartridge currently available. Your staff (excluding Meade) also attests to its excellence in your Vista Awards.

2. The cartridge which so soundly surpassed *Zaxxon* in Meade's opinion is *Sky Jinks.* Your competition found *Sky Jinks* to be boring and significantly below Activision's usual high standards.

You'd best attune to the changing market, Ms. Meade. A critic must be credible, and a devil's advocate is rarely credible.

Douglas S. Raeburn
Menomonee Falls, WI

E.C. Meade replies: You ask me to enhance my credibility by agreeing with the competition. That protects my *flank, but not the pocketbooks of our readers. No can do, Mr. Raeburn.*

Spidey, Tut, and the Hulk

Will Parker Brothers' *Tutankham, The Incredible Hulk* and *Spider-Man* be released for Intellivision?

Craig Whitcher
Madison, WI

Carol City of Parker Brothers informs us that there are no plans to release The Incredible Hulk *for Intellivision, but that* Tutankham *will be available in July and* Spider-Man *will be available in September for that system.*

Time as an Absolute

Why do you discriminate against Astrocade and Fairchild solely on the basis of their smaller share of the market? Why do you exclude them from your Vista Awards?

You gave Astrocade's *Incredible Wizard* a very favorable review; you then hypocritically refused to acknowledge the achievements of their system and others like it on the pretext that there are not many of them, so they can be ignored.

I think you would agree with me if I said that you should not judge the quality of a magazine simply by its circulation. So I ask you, how would you feel if I said that *Videogaming Illustrated* is not worth reading because its circulation does not compare with that of *Time* or *Newsweek?*

Don't judge a book by its cover or a videogame by its share of the market.

Brett Bilbrey
Address Withheld

Astrocade's own inactivity in the field excluded them, in our view.

Democracy in Action

The review of *Defending the Galaxy* in your April issue's *Print Out* column was totally inaccurate. Michael Rubin did an excellent job in putting the book together.

I think that the problem here is that the book takes the lighter side of videogaming. I don't feel that Ms. Meade approached the book with the right attitude.

Also, please include more reviews on *videogame* books. I think I can speak for most of the readers in saying that boardgames aren't of much interest to us.

Keith Hutchins
Oskaloosa, IO

One vote is all you get, Keith. Boardgames have been around since the age of the Pharoahs. We think they'll survive the computer age as well.

Give us the Bird

There is at least one significant "bird riding" tale that you missed in the *Meet the Original* article in your April issue.

In the third book of Tolkien's *Lord of the Rings* trilogy, *Return of the King,* Gandalf the wizard rides Gwaihir the Windlord, a giant eagle.

Due to the books' popularity, I didn't think you would want to exclude this item.

Brent Murphy
Sweetser, IN

Just testing you, Brent.

OUR PAST, YOUR FUTURE!

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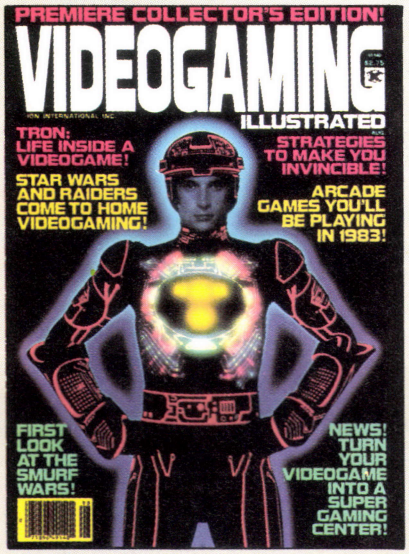
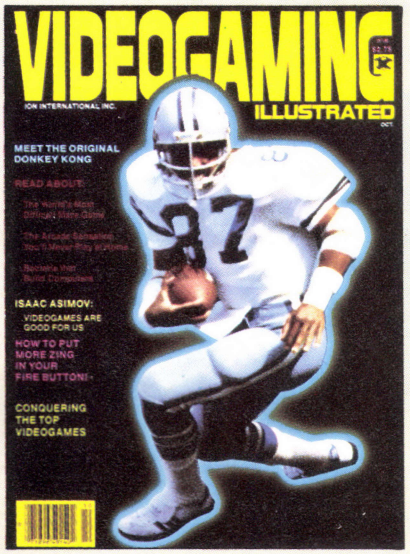


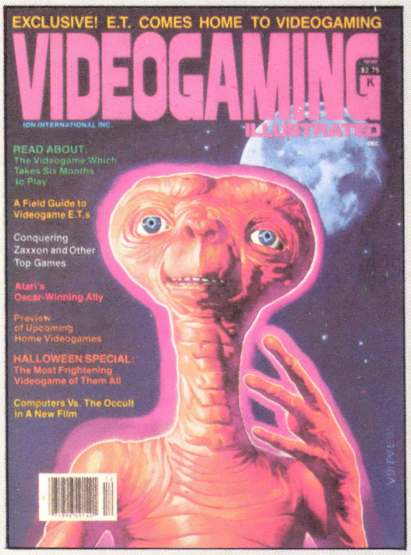
ISSUE #1

- *Tron:* how the movie was made, with seven pages of breathtaking color photos.
- The big arcade flops of 1982.
- Jim Levy, the president of Activision, throws hearts and daggers at the industry.
- How to hook your videogame system to your stereo amplifier for window-rattling sound effects.



ISSUE #2

- A gridiron superstar looks at football videogames, and tells why he opened an arcade.
- Science and science fiction author Isaac Asimov talks about why videogames are good for us.
- Conquering *Space Cavern, Pick Axe Pete, Space Battle, Donkey Kong,* and *Turbo.*
- How computers work.

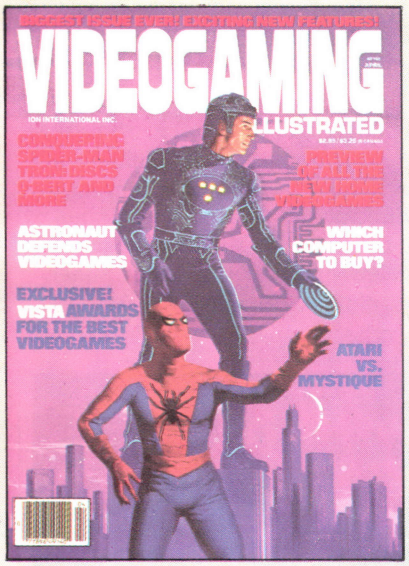


ISSUE #3

- A look at all the home videogames featuring extraterrestrials.
- What happens when computers are used to serve the occult?
- An interview with an Oscar winning actor who has an unusual relationship with Atari.
- How videogames are developed and manufactured, from concept to program.

ISSUE #4

- The story of the *Star Wars* saga, on film and in videogames, including a penetrating interview with the man who plays Darth Vader.
- An interview with radio's Don Imus, the most irreverent figure in the history of the medium — and avowed hater of videogaming.
- Conquering *Cosmic Creeps, Atlantis, Kangaroo,* and *Dig-Dug.*



ISSUE #5

- A profile of Stan Lee, the creator of Spider-Man.
- Conquering Tron, Spider-Man, Q*Bert, and Slither.
- A space shuttle astronaut discusses computers in space . . . and videogames on earth.
- A lawyer explains how to protect your videogame program.

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media preview

Motion Pictures

Inspired by the artistic success of *Tron* — and undaunted by its failure to find an audience in the U.S. — the Disney Studios are continuing to experiment with computer-generated animation.

Among the artists that the people at Disney are hoping to collaborate with is Maurice Sendak, the creator of *In the Night Kitchen, Where the Wild Things Are,* and other phantasmagoric books for children.

Pictured right are excerpts from test footage that was developed with a computer for a possible screen adaptation of Sendak's *Where the Wild Things Are.*

The process calls for an artist to block in geometric shapes from the computer. This they examine for motion and composition before they layer on detailed information.

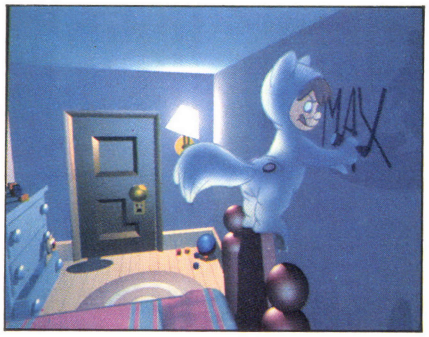
Each frame of film is composed of two million points of light, or pixels. Color and texture are added by assigning color and intensity values for each pixel and programming these values into the frame with the computer.

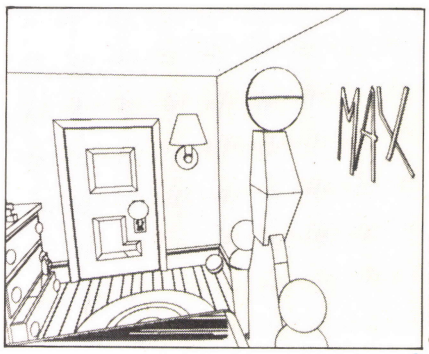
In speaking with *Videogaming Illustrated,* Maurice Sendak wanted to make it clear that only test footage was made. There are no definite plans to make a feature of *Where the Wild Things Are.* Although he has enjoyed working with the people at Disney and admires their computer-generated graphics process, Sendak said the main stumbling block is that, for the time being, he hasn't the time to write a script or supervise the film's visual design.

While the Sendak project is on hold, there are three other movies — one just under way and two in the can — that will be of interest to our readers.

© 1981 Paramount Pictures

***Indiana Jones continues his mystic adventures in* Temple of Death.**



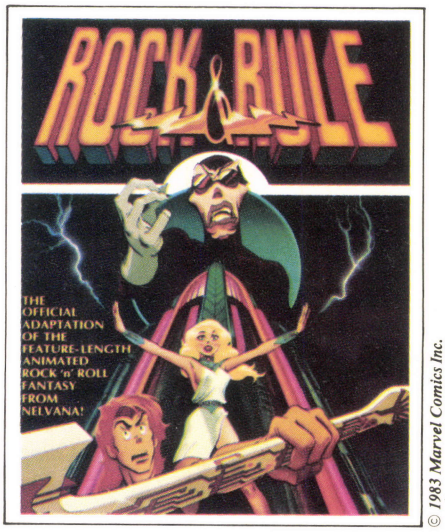


© 1983 Walt Disney Productions

As a kind of rehearsal or storyboarding process, geometric shapes are sketched and then examined.

Indiana Jones and the Temple of Death. The title certainly captures the serial spirit. George Lucas' sequel to *Raiders of the Lost Ark* begins principal photography in April in Sri Lanka and Hong Kong. Steven Spielberg and Harrison Ford will reprise their roles as director and star, but Karen Allen will not return as Marion. The movie is slated to be released next summer.

As of this writing, neither Atari nor any other company has bid for the rights to turn *The Temple of Death* into a videogame, as *Raiders* was.



© 1983 Marvel Comics Inc.

War Games. An MGM/UA spokeswoman was very excited about this one, which is to be released in June. *War Games* stars Matthew Broderick as a high school student who inadvertently hooks his home computer into a terminal that houses top-secret United States nuclear defense strategies and systems. Directed by John Badham, the movie co-stars Dabney Coleman, Ally Sheedy and John Wood.

Rock & Rule is an animated rock & roll horror story from Nelvana Productions and Marvel Comics, featuring the music of Cheap Trick, Debbie Harry, Lou Reed, Iggy Pop, and Earth, Wind & Fire.

In the post-apocalyptic future, Mok, an aging rock superstar who specializes in witchery and horror, is facing forced retirement. For his final concert, Mok plans to open the gates of hell with computer-generated sorcery and unleash a demon.

Cable Television

Brain Games, a half-hour show produced by, and broadcast on, HBO was inspired by a lowly restaurant placemat.

Some HBO programmers were playing games on their placements one day, the "what's wrong with this picture" genre of anagrams, puzzles, and rebuses that they remembered from their childhoods. They began to wonder if such games could be revived for children, wedded with today's child's interests in television, videogames and rock music.

Brain Games was born, and may become a series. The show was endorsed by the National Education Association. It employed computer

© 1983 HBO

Aesthetics aside, what's wrong with this picture?

graphics, voice synthesis, and a gatling gun pace to delight and challenge its young viewers.

Some of the games include:

Aliens: examine the busy surface of the planet Urk and find the hidden Glugs, Smoofs, and Warks.

Faces: how quickly can you identify famous historic and contemporary faces as they slowly appear through electronic drawings?

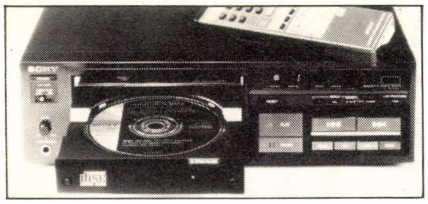
Mysterioso: identify the object by examining a small portion of it.

Lloofbat: a sportscaster gone mad is scrambling football terms. Can you ignore the visual extravaganza on the fantasy field and unscramble the terms?

Comedian Robert Klein and sportscaster Marty Glickman provided the voice-overs for the show. Most of the animation was realized through cutouts on acetate which were then manipulated under an animation camera.

The show's host was a sphinx (see previous page) who invited viewers to "contemplate, concentrate, speculate, operate, cogitate, translate, triangulate, orchestrate and activate."

And they say TV is a passive medium.



Sony's audiodisc player, shown with its remote control, contains features not found in the finest stereos.

Music

You've mortgaged your home in your quest for the ultimate sound system. You've spent the equivalent of the Gross National Product of New Zealand on your turntable, receiver, speakers, albums and the acoustical sealant on your den. Pay attention. Your system may be obsolete.

The digital audio-disc player is here. Whether it is here to stay is a question that only time can resolve, but the mere introduction of this new technology is sending shock waves through the industry. They're calling it the most innovative new product since the LP.

Replacing the LP in this system is the CD, the compact disc. In digital recording, 44,000 impressions of sound per second are taken by a computer and each is assigned a numerical value. The numbers are then recorded in pits embedded in the disc.

On the new Sony CDP-101, a drawer opens to admit the CD, which is placed on a central shaft. When the play button is pushed, the drawer closes and the disc begins rotating. Beneath the disc, a laser diode optically scans the disc, converting the microscopic pits into music. For an hour's worth of music, thirteen billion bits of information are scanned.

What all this new hardware is about is *sound quality.* The dynamic range that digital recording delivers is ninety decibels (the normal range of live music) as opposed to the sixty decibels that analog recording provides. Surface noise is virtually eliminated. As Paul Terry Shea wrote in *Rolling Stone,* "It's almost as though up until now you've been listening to your speakers through blankets."

A coating of plastic ensures that CD's are nearly unscratchable. They're also easier to store, being four and three quarters inches in diameter.

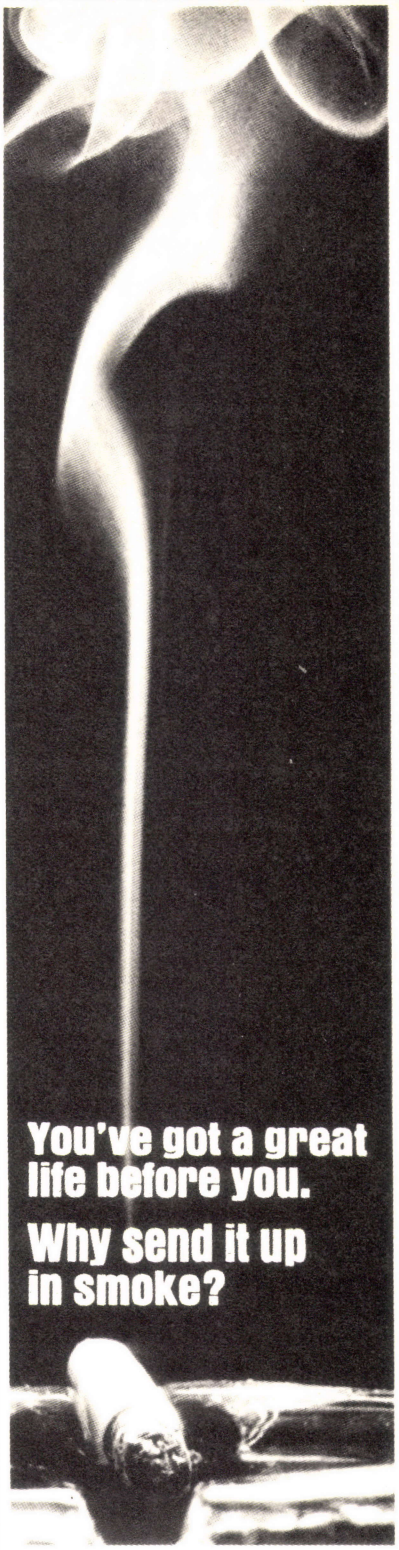
The audiodisc players carry interesting features. Sony's CDP-101 allows the listener to program the machine by remote control so that only certain songs are heard and in the order the listener wants to hear them. A selected riff can be replayed at the push of a button.

And now the bad news (or the good news, if you've just invested your life savings into a conventional sound system). Most audiodisc players carry a price tag of around one thousand dollars. The discs cost around eighteen dollars each. Insiders expect those prices to drop to around four hundred dollars and seven dollars, respectively, in a few years.

As of this writing, only sixteen titles were available on audiodisc, all of them CBS recordings. Naturally, insiders expect that number and selection to climb quickly. But what will become of the hundreds of thousands of titles now available on analog recordings? It is inconceivable that all of them can be converted to the new format.

And, finally, with the greater dynamic range of digital recording, more powerful amplifiers and speakers will have to be developed, and purchased, to take full advantage of the enhanced sound.

Yes, digital audio-disc players are here. But they will be playthings for the audio elite for some time to come.



Cigarette smoking is a major cause of lung cancer. Studies show it. Doctors know it. (At least 100 people die *unnecessarily* from lung cancer every day.) So if you want to live a little, play it cool and pass up the weeds.

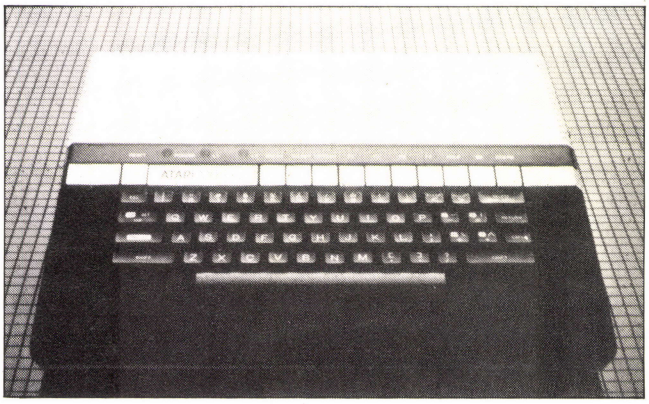
American Cancer Society®

THIS SPACE CONTRIBUTED BY THE PUBLISHER

FUN AND GAMES AND FUTURE-THINK

Atari is opening a string of summer camps with their three computers as the primary attraction.

by Martin Levitan



Summer camp! Hiking, swimming, softball, basketball, campfires and computer programming.

You say you don't recall computer programming as being a part of your summer camp past? Then your age is showing. The electronic camp is one of the new faces of the video age, and one of the most popular of these camps is the Atari Computer Summer Camp.

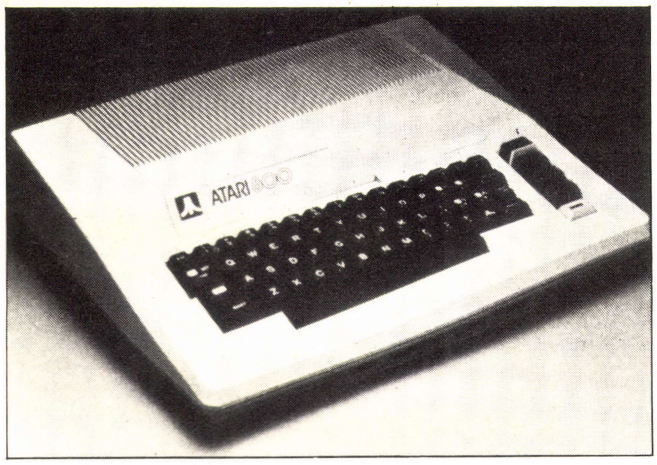
The electronic camp provides a child with an opportunity to go off on a two to eight week adventure for the mind as well as the body. The child between the ages of ten and sixteen will learn that there is more to computers than playing games ... other people's games, that is. The child is welcome to play any game (s)he designs him or herself.

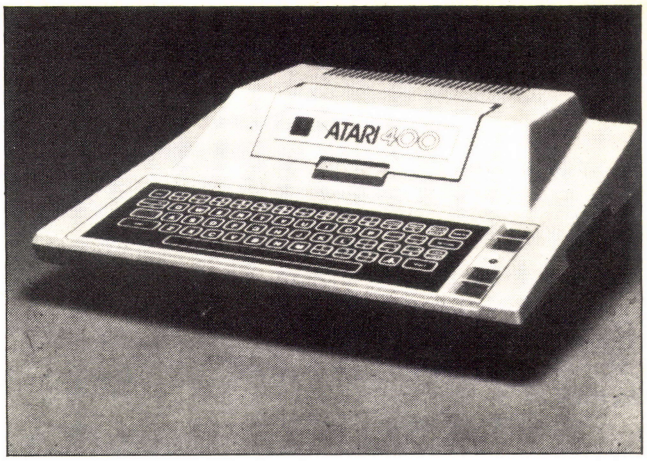
Summer camps are not your typical activity for a high-tech, profit-minded company. Don't worry, the business executives at Atari have not sent their profit motive on vacation along with the hundreds of young campers. Before we sent to the *bottom line,* as the executives like to refer to it, let us take a look at this summer camp operation.

Atari is a big company with a bigger company behind it. So, they can't afford to let their camp operation be anything but first class. Atari, who pioneered the idea with three camps last season, plans seven locations across the country for the summer of '83. Each site is on a school campus, chosen for its beautiful setting, comfortable housing, range of facilities, and accessibility. Each Atari camp features extensive computer equipment and peripherals, plus a library with over a hundred Atari software titles. A book library ranging from science fiction and fantasy to manuals and workbooks is also available. The camps offer a healthy balance between computer education and summer camp activities.

In addition to the four non-consecutive hours per day, six days a week a camper can spend in front of the keyboard, there are a full range of traditional camp activities, plenty of fresh air and plenty to eat. The typical day is a mix of computer learning time, scheduled activities, computer free time, more activities, barbecues, campfires, sing-alongs ... summer camp. The camps are intended to provide a non-threatening, comfortable environment in which to enjoy a summer vacation and help the child bring home something that will make growth in a technological world more manageable.

The curriculum is designed to address the needs of campers according to age, as well as experience. The program is structured to instill self-





The Atari 800 (left) is more versatile than the 400 (right) and boasts a raised keyboard rather than membrane keys. In addition, the 800 can be used with a TV monitor or a regular TV set while the 400 must use only a TV set.

confidence in their ability to control the computer. The pace of the program reflects the individual's mastery of the material. The program is flexible to meet the needs of the individual camper. Each youngster is evaluated to determine his or her level of computer literacy and placed in the appropriate class. There are two daily instruction periods plus individual hands-on computer time during which the child can work on projects and explore. Four hours of semi-exclusive use of a computer is more than the average school can provide to its students in a month and this caliber of instructors isn't found in your average school.

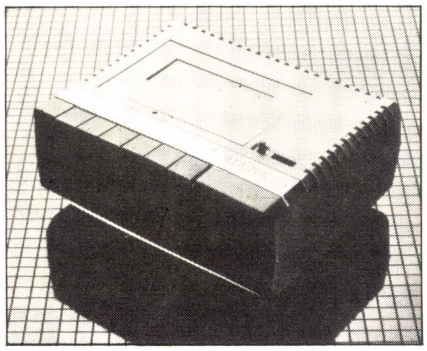
The camps are equipped with the latest in Atari products, of course, including the 400, 800 and the new 1200XL personal computers. In addition, campers get to use the various peripherals available from Atari. Parents shouldn't be surprised if the letter they receive from camp is the result of a word processing exercise using one of the four types of Atari printers. Even modems, telephone communications devices, are available to connect to "electronic bulletin boards" so campers can send and receive messages between Atari camps. They get to experiment with speech synthesizers and graphics tablets. They also get to write control programs for the Terrapin Turtle — a small robot that looks like a turtle which campers will learn to control with the computer. They get computer instruction from experienced computer educators and camping from the camp staff.

In all respects it is a first class specialty camp experience. The locations are all at rural college and school facilities in some of the prettiest vacation spots in the country. Quoting the brochure, which is a glossy and informative package, "... campers learn practical specifics as well as conceptual principles. Every camper is taught how to use (Atari's) powerful software, like a word processor, electronic worksheet, file manager, and mailing list program. Depending on their level of computer literacy and length of stay, campers are exposed to BASIC and PILOT." The campers work on projects in teams. They learn while having fun. Some of the software they have turned out at previous camp seasons has found its way into the company's catalog.

Atari's is not the only electronic camp available. Even Club Med has introduced a computer activity at one of its exotic locales. So much for "an antidote for civilization."

Their brochure answers the question of this new age, "Will my child be able to teach me how to use the computer?" You bet (s)he will. What do ya think this is all about?

This brings us back to the *bottom line,* which is why Atari is doing this.



Atari's 1010 program recorder. Storing programs on cassettes is slower but less expensive.

Sales. Sales of hardware and sales of software. Manufacturers of home computers have realized that the first computer a child is exposed to will probably be the one bought. Studies have shown that the first computer on the block quickly becomes the second, third, fourth and fifth. This domino effect can be started in the school or in a summer camp. Atari is hoping the advertising value of a successful summer camp program will contribute to name recognition and topple the dominos in their direction.

They are not ignoring the school room, either. Atari is also marketing aggressively to educators. Typical of Atari's activities was their participation at the Computer Using Educators (CUE) fall conference in San Jose, California. Chris Bowman, national manager of educational marketing for Atari, was there with an Atari team. Atari's approach is to market aggressively in the home and school market with machines and software suitable for individual growth and play.

So, in case the only thought that came to mind when you heard the name Atari was videogames, you should now realize that you've been feeling the tail of the proverbial elephant. Atari is a lot more than videogames. And for Atari there is a lot more to videogames than home entertainment. Videogames are the beachhead. They are the first step in a marketing strategy that is designed to bring us from game play to a mind expanding encounter with the experience of home computing.

While Apple and TI may have far better name recognition as home computer makers, according to a recent household poll by the famous firm of

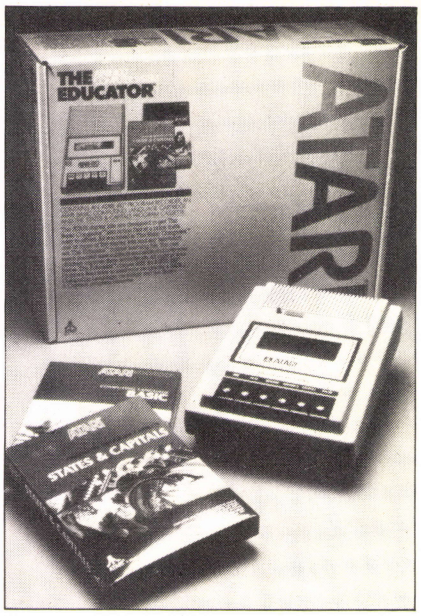
Arthur D. Little, Atari is not to be counted out. Manufacturers like Apple and Radio Shack have tried to be all things to all users from business to hobbyist. Meanwhile, Atari has concentrated on positioning itself for an assault on the home computer market. Its first generation computer, the 400, was designed to attract game enthusiasts with superb graphics and the sharpest resolution of the five machines in its class, including TI. Its other entry, the 800 goes a step further in features.

When *Time* magazine did their "Computer of the Year" piece, Dataquest, another research company, estimated that Atari had a 13% share of the low priced group of computers selling for less than $1000. That represents nearly 200,000 Atari 800s shipped in 1982 and some 400,000 of model 400s. The personal computer has replaced the HIFI system as the technological gadget of choice in this decade. The home computer market seems to have been slow to develop for those of us that have been watching it all this time. But it is growing with its public; maturing from the video game stage that began with Atari's *Pong* in 1973. Computers in the classroom have led to computers in the home in record numbers each year.

Atari, already in the home market with its VCS machines, has taken the natural next step from purely game machines to beginner's computers that allow game play and computing. They have a good deal of understanding of their user and have structured their product line to their perception of how they can grow in the home.

The Beginner's Computer

A complete Atari personal computer system includes several pieces of equipment. System components come from a long list of optional equipment. Each system has two components in common: the Atari 400, 800, or 1200XL computer and the television set. The Atari 400 and 800 computers are virtually identical. The differences between them are in packaging and expandability. Their performance is identical and they obey the same software commands. The Atari 800 is a bit more versatile than the 400. You can change the memory capacity of the 800, by yourself, but not the 400's. You can choose to use either a television monitor or a regular TV set with the



The Educator Kit comes with a 410 program recorder, a BASIC language cassette and geography lesson.

800. The 400 can only use the regular television. The keyboard on the Atari 800 computer is larger and more like a typewriter keyboard. The Atari 400 has an advanced spillproof and childproof design which uses a pressure sensitive, wipe clean mono-panel for its full alphabetic, numeric and control function keyboard. If all this childproofing becomes a problem, there are a number of vendors, such as Tara Computer Products, that provide keyboard upgrades that replace the membrane keyboard with full travel keys.

The Entertainer Kit provides two joystick controllers and* Star Raiders *and* Missile Command *carts.

You may begin to realize that the Atari computer is a highly capable graphics machine. There are some pretty advanced graphics built-in that go beyond what can be used by the BASIC Language. You can animate graphic displays with character set animation, where your own design can take the place of standard characters. You can replace the standard character set with a font that you like better, or you can invent characters in order to create your own graphics, bit by bit. Another feature called Display Lists allows you to set up custom graphics displays using the special microprocessors that control graphics. Display lists allow you to create displays that are often difficult on other computers, like mixing graphics modes on the same screen. Suppose you wanted to have the top half of a graphics mode zero (text) screen appear as it normally does, but you wish to turn the lower half of the screen upside down. If you can think of it, this baby has a way to let you do it.

Another graphics feature is called "player-missile" graphics. This feature provides fast-moving objects for games and other applications. Players and missiles are special graphics objects which you define that are designed for rapid movement on the graphics screen. There are up to four player objects available, each with a corresponding missile. Player-missile graphics are totally independent of other Atari computer graphics. They act as overlays on the screen. Player-missile graphics images can appear to be in front of or behind the normal playfield graphics on the screen. This allows you to write programs with the illusion of three dimensions. Players can move rapidly on the screen without adversely affecting computing speed. They bypass the 6502 microprocessor (the main brain) because they have their own brain dedicated to their images.

Recent versions of the 400 and 800 come equipped with additional graphics modes. Modes nine through eleven are graphics modes only; no text can be displayed on the screen. Points plotted on the screen in these modes are rectangular in shape, about four times wider than they are high. Using graphics modes nine through eleven will allow for a greater variety of hues and luminance on the screen. Most of us won't use a fraction of the graphics

Continued on page 62

Star Blazer

Star Blazer, by Tony Suzuki, who also wrote *Alien Rain,* is a flicker-free graphic extravaganza from Broderbund that combines wit and superb action.

You are the Star Blazer, an undercover freedom fighter who patrols the galaxy undertaking missions to combat the repressive forces of the Bungeling Empire. For this special mission you will need an Apple II, equipped with keyboard or joystick controls.

You have three vintage World War III fighterbomber jets to exploit against the Empire. Each of these jets has a thirty thousand gallon capacity as well as a holding area for thirty bombs.

Your jets blaze across the screen from left to right. Everything on the ground and in the air is faster than you are except your supply planes. Fuel supplies and bombs are precious. To either refuel or rearm, you must catch the cargo parachute dispatched from the supply plane. The supply plane flies overhead sporadically, not always when you can use assistance, and enemy ships are always eager to intercept your supplies and thus doom you to a fuel-less fall to earth.

At low altitudes your fighter will drop bombs which, if misaimed, will strike the earth. At higher elevations you fire salvos from your pulse cannons.

There are five missions in *Star Blazer,* all of which must be successfully completed in order to defeat the Bungeling Empire.

The object of your first mission is to destroy enemy radar installations. To bomb the radar you must fly at low

altitude, but if you are not firing you should climb. Colliding with high tension towers, which are stationed at random throughout all the mission terrains, cuts the game short with spectacular graphic effects.

Mission two requires tricky maneuvering in order to demolish the Bungeling tank. Even the tank is faster than you are! It is best not to try to pursue and bomb the tank; better to employ one of two alternative tactics. One tactic involves setting your joystick to fire even before the screen appears. This should destroy most incoming missiles. Move to the right of the screen. The tank will disappear. Now move to the extreme left. This will lure the tank to back up toward you. Quickly now, move right and upwards and release your bombs while avoiding enemy missiles. With practice, this method should help you eliminate the tank.

For the beginner, a second tactic might be preferred. Wait for a supply plane in the extreme lower left of the screen. When the transport appears it will drop fuel on a parachute. You can cut the parachute lines when the fuel is over the tank. The tank should be incinerated unless a vulture snatches the chute away.

The third mission involves bombing Bungeling ICBM installations while avoiding enemy planes and sky mines. The ICBM's, which look like orange mushrooms, appear on the screen only periodically. The high tension towers are once again a hazard, and tanks will rear their ugly heads once again, only this time they fire heat-seeking missiles.

The fourth mission is similar to the second. You must bomb the tank and avoid the enemy space ships. Slow cannon shells join heat-seeking missiles in the Bungeling arsenal. The strategies outlined for mission two should serve you here as well.

If you are fortunate and skilled enough to reach the fifth mission, you must annihilate Bungeling Empire Headquarters, which are, of course, extremely well protected by green and white control towers. This last mission is very difficult. You must contend with space ships, space mines, towers, and heat-seeking missiles ... and perhaps even a goitered gobbler! If you successfully complete mission five, you will have saved the universe.

The high-resolution graphics of *Star Blazer* are very good. The attention to detail in sounds as well as the installations and weaponry make the game worthwhile. If you use the keyboard, the REPT key is important for ease of play: smoother maneuverability results, and fewer keystrokes are needed. The ESC key allows you to pause and ponder your next move.

That ESC key comes in handy: *Star Blazer* is a very fast-paced game.

— Martin and Susan Levitan. Research by Jeff Wainhause.

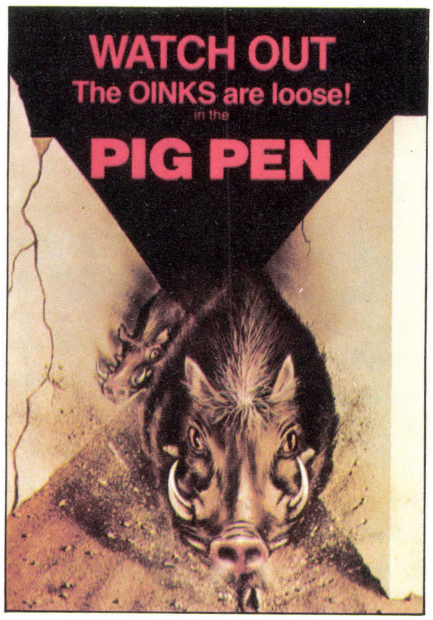
Just as we went to press, Broderbund announced that* Star Blazer's *title had been changed to* Sky Blazer. *Broderbund's line of software is varied and imaginative.

Pig Pen

Pig Pen is another maze game from Datamost for the Apple II. As the title suggests, the maze is a pen. The player assumes the role of a skinny city slicker trapped with malevolent boars and pigs who would like nothing better than to trample, chew or gore the player with razor-sharp tusks and throw him/her in the slopbucket.

The player is given the choice of facing from one to eight porcine pests. As is customary, the player must cover the first maze completely before (s)he can escape to the next "rack." There are four progressively more difficult racks.

The player leaves behind a trail of dots which the pigs follow. One strategy involves splitting trails to throw pursuers off. The player must find pulsing pills which, when swallowed, energizes the player and allows him/her to transform any pigs in the vicinity into gentle, smiling hams.



Ten points are awarded for each trail dot layed down; two hundred points for the first pig that is destroyed (roasted?); four hundred points for the second, and eight hundred for each successive opponent eliminated. If the player happens on the elusive Ear of Corn, one thousand points are awarded. A bonus is given for each ten thousand points scored. Once again, the ESC button allows the player to pause and comtemplate his/her next move.

As is obvious from the game description, there is not a great deal of coherence to the theme of this game. No explanation is given for what the trail dots are nor is there any rhyme or reason to a pill which allows the player to roast one of the pigs. Sound effects are nothing special; they could have been.

Even giving credit for a witty theme and wild game play, *Pig Pen* is for maze addicts only.

— Martin Levitan

Evolution

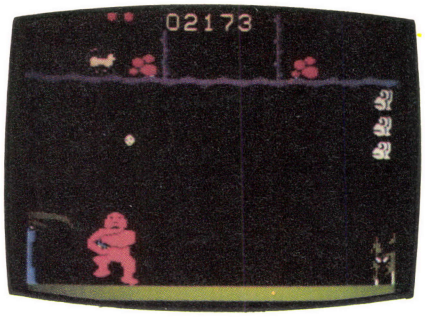
Sydney Development Corporation has released *Evolution* for the Apple II. Cynics will wonder if the long struggle from amoeba-hood is worth it, if all the player will become is a human being. Game players will not care. *Evolution's* high-resolution graphics and fast game play are reward enough.

There are three difficulty levels to choose from, and five evolutionary steps to conquer. If the player fails at any one step, he/she falls down the evolutionary ladder to amoeba status and must begin the long climb from scratch.

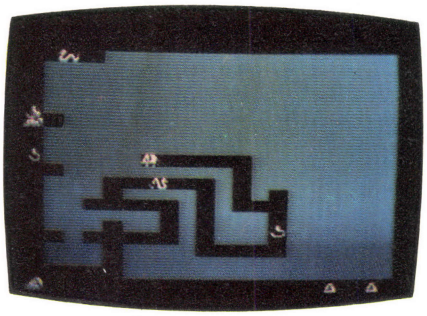
In the first stage, the one-celled protozoan gobbles DNA while avoiding the swarming paramecium. The player has a limited number of shields to protect him/her. If all the attackers are avoided and all the DNA consumed, the player can evolve to the next level.

As a tadpole, the player must flee from hungry fish while trying to consume at least three elusive water flies. To avoid the predators, the player can swim with pulsing speed or leap high to avoid death.

The player has now evolved to a rodent, one pursued by snakes. The player chomps his/her own maze in a search for five scraps of cheese. The rat can trap the snakes in the maze or can stop them with his/her allotment of three dung piles. Powerful weapon, that. Once all five cheese bits are consumed, the player evolves once more.



A player who is skillful enough to evolve into a human being will receive a sobering lesson for his/her efforts: an apocalyptic explosion ends the game.* Evolution *is Sydney Development Corporation's first entry in the game market. They're now working on a space adventure.



Now a beaver, the player is building a dam. Five more sticks are needed to complete the dam. But as the player grows, so do his/her predators. This time it's alligators. The player must cross the river five times and complete the dam in order to make a monkey of him or herself.

As a gorilla, the player must protect three offspring. The object here is to gather and store food up in the vines while fending off the attack of annoying monkeys. The player's only weapon is coconuts which must be hurled to dislodge the monkeys from the vines.

Now the player has evolved to become a human being. But the struggle is not over. In a *Berzerk*-style battle, the human must fend off the attack of ten genetic mutants.

Evolution's graphics are excellent. Sound effects for each environment are exquisitely detailed. The game never becomes repetitive; each evolutionary stage presents a new challenge, a new strategy. And consider that there are ninety-nine levels of skill.

One more thing to consider: the game's designers, Don Mattrick and Jeff Sember, are seventeen and eighteen years old. It will be fun to watch *them* evolve.

— Susan Levitan

A.E.

A.E. is a science fiction fantasy game from Broderbund, designed by Jun Wada and Makoto Hora, for the Apple II. A.E. is a Manta Ray-cum-mechanical monster with a flat winged body and a long, whiplike tail. Its spines drop from its body with devastating impact.

There are eight levels of play in *A.E.*, each level representing a different locale within the cosmos and still another challenge from the soaring, menacing waves of the Sting Ray creatures.

Level one places you in a realistic city on Earth. The swirling A.E. first appear as specks in the distance, but they then grow across the 3-D landscape to full size over your defenses.

The A.E. begin their attack by traveling in a school of six, darting in and around the city structures. Eventually the wave of A.E. will divide, perhaps striking at you independently, or in pairs, or in trios. Your only defense against the Manta Rays' stinging bombs is three missile batteries. You must make three perfect attacks before progressing to the next level.

***Broderbund Software has been de-emphasizing shoot-em-up games from their line of software. But when they do decide to release a combat game, it's a pip. Witness* A.E.**

Pressing paddle button Ø on your joystick will launch a delayed detonation missile. Letting up on that button stops the missile and detonates it, hopefully, in the direct path of the A.E. Remember that distance is on your side. Often you can destroy an entire wave with one precise shot. Try aiming at the front of a wave, which will cause others to collide.

Following level one, The City, are: the Suburbs, Earth's Atmosphere, Between Earth and Mars, the Asteroid Belt, the Environs of Saturn, the Extremes of the Known Universe, and the Galaxies Beyond.

Precision, timing and good eye-hand coordination are of the utmost importance in playing *A.E.* Good reflexes are of lesser importance.

A.E. is a highly recommended, very challenging and rewarding game. The 3-D graphics are stunning, and the serpentine movement of the A.E. is mesmerizing. As our researcher, a twelve-year-old arcade player, says, "If you like shoot-em-up games, this is a good one."

— Susan Levitan
Research by Jeff Wainhause

Pandora's Box

Greek legends tell of a woman named Pandora. The Gods entrusted Pandora with a box that contained all the evils which would go on to plague mankind forever. The Gods instructed Pandora not to open the box. The Gods then sat back, knowing full well what was going to happen: Pandora, driven by unquenchable curiosity, opened the box just to take a little peek ... and unleashed the world's evils. The Gods, you see, wanted revenge for Prometheus' theft of fire.

Now let's hypothesize that you're an owner of an Apple II and have been loaned a box containing Data Most's *Pandora's Box*. If we may play God for just a moment, we warn you not to open it. Should you choose to, your troubles and miseries will multiply at an alarming rate.

To play *Pandora's Box*, you can use either Apple's keyboard or a joystick, if you're so equipped. We recommend using the joystick. Playing the game with the keyboard can be confusing and cumbersome, since you must handle eight keys almost simultaneously.

At the game's beginning, you are hidden in a cloud overlooking Earth in the time of the ancient Greeks. Buzzards, or birds of ill-omen, are flying all around you. The evils that Pandora has loosed upon the world can be found on the earth's surface. These evils are represented by snakes, turtles, and a humanoid creature.

Zeus, perhaps regretting his little joke on Pandora (and all mankind) has armed you with lightning. By striking the evils with your lightning bolts, you can return these evils to Pandora's box.

Most of the action takes place on the left of the screen. Here you will find Greek temples, forests, a lake, and a graveyard.

On the right side of the screen is your locator, a box within a box. The smaller box represents your immediate surroundings as seen on the left, but without the geographical features. When you move your fighter-figure on the left side of the screen, the inner box duplicates your movements on the right. Dots surrounding the box represent the evils you are battling. When you zap an enemy, a dot will return to the inside of Pandora's box.

Your score, the number of your lives remaining and your lightning level indicator are in the lower right of the screen. On top of the screen is the high score, the game's title, and the game's authors.

Pandora's Box contains eight levels of play, each of them timed. If you do not contain all the evils in levels one to seven, they will return to plague you in level eight.

Pandora's Box is, itself, plagued. Plagued by slipshod design, sluggish play, annoying sound effects, and poor graphics. The characters are not easily distinguishable and at times are distorted. We played this game on three different monitors — black and white, green, and color — and each time the game provided disturbing, poorly-defined graphics.

Remember: you were warned.

— Susan Levitan
Researched by Jeff Wainhause

At last, the first joystick that puts the firing button where it should have been in the first place.

The new Triga-Command is like no other home video joystick controller you've ever used.

The firing button is directly under your trigger finger, the finger with the fastest reflex action. Which means your thumb doesn't ache any more after playing long games, your firing is more accurate, and your scores are higher.

No other joystick gives you such a terrific grip either. That's because the handle is big and comfortable, not thin and spindly like the others. It's shaped to fit your hand, and has a diamond-cut textured surface to give you the "feel" of genuine Arcade-style joysticks.

Another unique feature are our removable suction cups under the base which clamp Triga-Command firmly to any smooth playing surface for total single handed operation.

And our joystick is tough. It's made from high impact plastic, so it won't crack under pressure.

Do you use an Atari 400 or 800 computer, the Atari 2600 system, Vic-Commodore computers, or Sears Tele-Games? No problem. Triga-Command fits them all.

All thumbs with ordinary home video joysticks? Get a grip with Triga-Command. It's the first joystick to put the firing button under your trigger finger. And isn't that where it should have been in the first place?

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Bird Attack

Tom Mix makes software for the TRS-80 Color Computer.

Mix (yes, that's his real name, and no, he's no relation to the horse-kissing cowboy) and his wife Giselle run a small company out of their home in Grand Rapids, Michigan. Their line of computer software is small, but already legend within the burgeoning ranks of Radio Shack programmers.

Mix has received rave reviews for his *Donkey King,* the finest version of Nintendo's *Donkey Kong* game available in any format. In fact, it surpasses the original. Consequently, a lot of media attention has been focused upon *it* while the firm's other notable products have been left, rather injudiciously, to flounder in King/Kong's sizable shadow.

One piece of Tom Mix software that deserves far more attention than it's been receiving, is an unassuming little game which caters to and enshrines man's base killer instincts.

Bird Attack is similar to Atari's new *Galaxian* cartridge. The color and gameplay are comparable, with one very noteworthy exception: *Bird Attack* has a sense of humor!

The game, like the majority of video/computer diversions, is imbecilely simplistic. A cloud of birds fills the screen, swooping down upon a red-garbed hunter who wields an only slightly undersized anti-aircraft gun. The object is, of course, for the hunter/player to perpetrate mindless wholesale slaughter before being obliterated by the birds in their Hitchcock-inspired madness.

In the game instructions, Mix and author Andrew Hubbel would have you believe that the birds are dropping little white bombs upon their gun-toting adversary. Don't you believe it! Bombs have a tendency to go *boom,* or at the very least, to mimic one or more of the growing computer arsenal of sound effects.

But there are no blasts or explosions of any kind in this game. When the hunter is bombarded, he's simply suffocated beneath a small white mound of dyspeptic expulsions.

Author Hubbel's sense of humor is further in evidence in the game's obligatory scoreboard. The number of hunters waiting in the wings to avenge their grossly interred comrade is ingeniously noted by three flickering candles in the wind. Once a hunter has been inundated beneath his winged assailants' mellifluous byproduct, his representative flame of life is extinguished, and the candle replaced by a tiny mausoleum.

The fidelity and gameplay of *Bird Attack* is as impressive as Atari's *Galaxian.* The birds are multi-colored and swoop upon the hunter in unpredictable random attacks. Their chirping sounds are surprisingly lifelike, as is the hunter, who is far more than the traditional video/computer game stick figure.

As in *Galaxian,* those birds that succeed in descending past the hunter unharmed are replaced by new birds swooping from the top of the playfield.

Unlike *Galaxian,* and contrary to the description provided here, *Bird Attack* is a gentle game. There are five levels of difficulty, but even in the fiercest mode of competition, the birds and their salvos are extremely slow-paced, making them all the more difficult to hit. Unfortunately for the player, the birds at that most experienced level of play seem to be suffering from near-terminal Montezuma's Revenge. When they swoop from the sky, they do so in a massive cloud that would've given even the aforementioned master filmmaker nightmares.

At about half the price of *Galaxian* (or any new home videogame cartridge for that matter), *Bird Attack* is a fun, humorous way to waste an idle afternoon. More games in the genre of video shoot-'em-ups should be this jocular. It's becoming to the medium

— Bill Dubay

Defense

The world's at war ... again! Your job is to survive Armageddon and stop treacherous fire rains with laser-generated shields that will neutralize the unconscionable onslaught — no doubt Communist-inspired. All pretty familiar fare for the veteran videogamer!

Defense is a relentless assault on the defenses of the TRS-80 Color Computer. It's just one of a handful of software gems produced by Spectral Associates of Tacoma, Washington, that brings arcade quality graphics and gameplay into the realm of the personal computer.

The object is to stop enemy lasers before they obliterate one or more of your six vulnerable base stations, your main defense outpost or the ammo dumps which serve as the sole source of energy with which to deter the incoming assault. There are, however, a few glitches that make the task far more difficult than it sounds.

Enemy lasers, for example, bombard the home outposts in a relentless, never-ending onslaught. At best, they're difficult to stop. At worst, when both defense outpost and ammo dumps take direct hits, the player is left with no defense whatsoever.

More glitches, grabbers and gillibumps: just when you think you're getting the hang of stopping the laser assaults, along come little twirling buzz-bombs, tumbling end over end on a collision course with the base stations. Fire a salvo of energy to create an impenetrable forcefield, and the bombs tumble around the shield, oozing off its sides like warm honey on buttered toast.

In addition, if the bombs, lasers and multi-salvos weren't enough, next come the flip charges: deadly red fireballs streaking from the top of the gamescreen, circumventing every maneuver to destroy them.

When a base station is levelled by a laser blast, buzz bomb or flip charge, a horrifying realistic blue mushroom cloud appears momentarily, accompanied by the sort of sound one might expect to hear in that split second before being deep-fried by an incoming Commie warhead.

Gameplay is fast, furious and very often frustrating. The graphics are crisp, imaginative and equal to, if not better than the most popular home and arcade games.

Defense is a very real and terrifying simulation of civilization locked within a no-holds-barred nuclear confrontation; man's ultimate fate made manifest in a game for man's enjoyment.

— Bill Dubay

FUN & GAMES

Continued from page 56

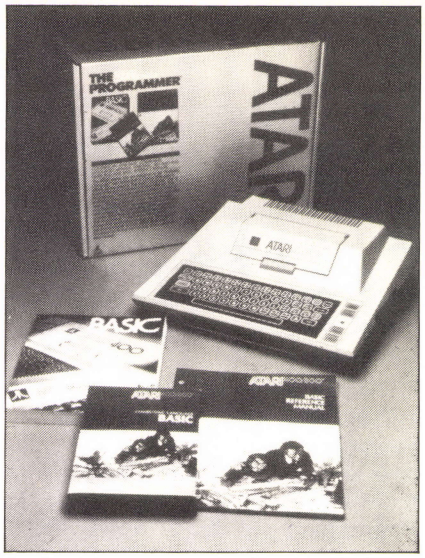
capabilities of these machines in our own programming, but with such a rich pallette of easy options our programs are likely to be generous in their use of graphics.

The sound effects are on a par with the video. The built-in special functions that support the sound effects are well thought out. The Atari can play up to four different notes simultaneously. This means that while most home computers make certain sounds only during such activities as firing missiles or collisions, a separate background theme or environmental noise can be playing throughout.

The Atari 400 is a basic computer. It comes with 16k RAM (free memory space used for storing the program) and an operating system nicely tucked away in 10k of ROM (read only memory, it can only be read, you can't erase it). The Atari 800 also comes equipped with a basic 16K RAM. It is expandable to 48K by inserting special 16K modules in slots in the rear of the machine. The 400 has a lid which must be opened before you can gain access to the cartridge slot, and this cover must be closed again in order for the cartridge to operate. The Atari 800 has two cartridge slots and the entire rear lid lifts off, giving access to the most intimate parts of the computer.

The Ataris are the acknowledged machines of choice for game players and game writers. The graphic resolution of 320X192 is about the best you can get on a home computer. The sound effects are on a par with the video — the Atari can play up to four different notes simultaneously. The Atari has earned its reputation by some tricks under the cover. Most microcomputers try to do everything with the main processor. Atari doesn't. Atari has three custom electronic components that take the load off the main computer chip and allow the Atari to do many things, simultaneously. Doing many things simultaneously sets the Atari machines apart from the crowd. One component is dedicated to controlling the colors and the graphics. Another creates musical tones and handles the joysticks and paddle controllers; yet another takes care of sending information to printers and talking to disk drives.

The four joystick ports enable games to be played by a maximum of



The Programmer Kit contains the BASIC language cartridge and reference and self-teaching manuals.

four players if the joysticks are used, and eight players with the paddles. The 400 hooks up to the television set using the same set-up as Atari's VCS.

The Atari graphics capabilities are quite extensive. At the simplest level are a set of graphics modes accessible from the BASIC Language interpreter. There are nine graphics modes, numbered zero to eight, that you can use with BASIC.

Mode zero is the text mode that you see when you turn on the computer. Graphics one and two are expanded text modes that use a defined set of special characters to develop graphics.

The Communicator Kit provides the Telelink II cartridge and the 835 Direct Connect Modem.

Each succeeding graphics mode defines a higher resolution graphics and increased color control capabilities. Modes three through eight display points, lines and solid areas. The point size, number of points per line, number of lines on the display screen, and number of color registers used vary from one of these modes to the next. The colors available in each mode are selected from sixteen basic colors. Some modes only show two colors at a time; others show four colors. In mode eight, by using some high resolution special effects, the different hues can be made to appear to have different luminance.

The sound capabilities are quite impressive. The other computers in its class depend on the standard built-in speaker. The computer clicks its built-in speaker every time you press a key. Pulsing the speaker several times in rapid succession generates a tone. The faster the pulsing, the higher the tone. Atari noticed that BASIC doesn't execute fast enough to create any high notes on the built-in speaker. Atari solved the sound problem in a big way. The sound effects can be sent to the television speaker. Such sounds can be simple or complex: they can have one, two, three or four voices. Each voice can vary in pitch by more than three octaves. It can vary from a pure tone to a highly distorted one. Each voice has its own loudness level, independent of the television volume setting. With this capability you can create many realistic sound effects. All it takes is the right combination of voices, pitch, distortion, volume, and timing. Finding the right combination for a particular sound can be fun. Lots of program routines are already available to show you where to start.

The Beginner's Systems

The Atari Computer is the center of a flexible system of software and other peripherals. In order to introduce you to the magic of home computing, Atari sells various combinations in "starter kits". The aim is affordability and instant success for the user. The kits are grouped around the 400 or 800, but, except for memory limitations, are interchangeable on each machine. Any memory limitations of the 400 can be overcome with non-Atari kits that will bring its memory up to 48K just like the 800.

The Educator Kit comes with an Atari 410 Program recorder to load

and record your own programs, an Atari BASIC Language cartridge (one of two different BASIC Languages available). Also included is the Atari States & Capitals cassette which offers geography lessons. A number of the educational programs are written in BASIC and provided on cassettes.

The Programmer Kit also contains the Atari BASIC Language cartridge and the reference and self-teaching manuals to help you learn introductory programming.

The Entertainer Kit provides two joystick controllers and *Star Raiders* and *Missile Command* cartridges. These two games do the arcade versions justice. They have features that could not be implemented on the Atari VCS. They take good advantage of the powerful graphics resident in these machines.

The Communicator Kit is the computer's link to the outside world. It comes with the Atari Telelink II cartridge and the Atari 835 Direct Connect Modem. These devices are used to connect your Atari to a variety of communications services. In some cities this package has already been selected for bank by home computer services. The package includes some introductory connect time to three information services: Dow Jones, News/Retrieval Service, The Source and Compuserve. You can use these services to get stock market information, shop at home, receive electronic mail, search massive data bases and access thousands of programs.

The *Bookkeeper Kit* include accounting software and the convenient Atari Numerical Keypad for your home office. To use the full capabilities of this kit your Atari should have 48K RAM, an Atari BASIC cartridge, the Disk Drive, an eighty column printer and the Atari interface module.

The *Home Manager Kit* provides disk based software that tracks your finances, and plans and projects household budgets.

You can save files and list on diskettes with the *Home Filing Manager.*

Atari has assembled a versatile and fun computer system. The Atari Program Exchange, hundreds of commercially available software packages, the introduction of the 1200XL model and the accessories ... there is so much more to talk about. If you need to know more, send a kid to camp or watch these pages. We are not yet finished with Atari.

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championship videogaming

A Column of Tips and Trivia From Our Readers

To the Editor:

In the *Championship Videogaming* column in your April issue, a reader found a "fly in the soup" in Coleco's *Donkey Kong*. I've found a comparable bug in *Donkey Kong Jr.*

On the Super Jump board, when you reach the platform directly under you bonus indicator, move left and fall off the platform. Grab onto a vine and hold your stick up so Junior climbs up. You'll notice that Junior climbs right through the top platform and onto an invisible vine.

I don't know if this paranormal phenomenon was programmed into the cartridge purposely or if it was accidental.

Joey Matello
Follansbee, WV

Someone must have gone bananas.

To the Editor:

I spend much of my time playing arcade games and I have accumulated relatively high scores on *Galaga* (2,685,030), *Jungle King* (58,640), *LadyBug* (192,060) and *Time Pilot* (5,436,4000). Here are some tips for each of the aforementioned games.

Galaga. The safest way to play *Galaga* is with a double fighter. To obtain a double fighter, you must allow the large green/blue attacker to capture your ship in a tractor beam. The captured fighter will be released if the captor is destroyed while it is attacking.

If you can accomplish this, then the main strategy is to eliminate as many enemy ships as possible before they set up in formation. In addition, an effective point-scoring technique is positioning your double fighter in the center of the screen on the first, second and fifth challenging stages (stages three, seven and nineteen respectively). If you fire at the correct times, you can easily achieve a perfect score of forty hits on each of these stages.

Jungle King. In *Videogaming Illustrated's* April issue, reader Mike DeMild said that the first three vines could be jumped in rapid succession. Actually, the first *four* vines can be jumped without hesitation. Having done so, the player should then jump at the peak of the third swing of the next vine, then jump at the peak of the first swing of each additional vine, until (s)he reaches the water.

LadyBug. You should eat the hearts while blue before eating the letters. This will advance all scores to five times their original value. Then you should eat the letters when they are red or yellow to spell 'special' or 'extra.' Use the revolving doors as often as possible; they are your only advantage over the hostile insects.

Time Pilot. The secret of my high score is that I stay on the 1910 stages (one, six, eleven etc.) for an extremely long time. Just avoid the zeppelin and destroy all other attackers. I played one game of *Time Pilot* for three and a half hours. My final stage was only stage fifteen.

Chris Boylan
Manchester, NH

To the Editor:

I've found a way to score 919,500 points on game number four of *Smurf Rescue in Gargamel's Castle* ... in under one minute.

Just keep going back and forth between the first and second screen as fast as you can. Do this for about fifteen seconds and the score should show 919,500, while the indicator of your number of remaining Smurfs will sprout like a field of grass.

Russel Olmstead
Covington, OK

We suspect that's not what the gamemakers had in mind, but one man's cheat is another man's challenge, we suppose.

To the Editor:

In the Ensign level of *Starmaster*, you can destroy three fewer ships than is required and still receive the points.

Move your figure between the top two starbases. Destroy those two and then flip the color/b&w switch. Voila! Five ships are gone and you only destroyed two!

Chad Wagner
Powell, OH

We sense a whole new genre of "How to Beat the Videogames" books coming to the fore.

Roving reporter Randy Palmer visited various arcades in New York and elicited the following strategy tips:

Sinistar

"Destroy red aliens when crowded together. Give the Bombers top priority, however, since they contain a cannon which can blast your ship to atoms."
— Mario

Mr. Do

"Use caution when firing since the bullet bounces erratically and may backtrack. Burrow under apples to drop them on your enemies (similar to *Dig Dug*)."
— Steve Lewis

Popeye

"Punch the punching bag (screen one) as much as possible. Even after the hamburgers have dropped, you still get points each time it's hit."
— (no name given)

Tutankham

"Shift joystick back-and-forth rapidly (keeping your man in one spot) in order to draw the creatures toward you. Avoid trapping yourself in vertical tunnels. Seek out horizontal ones from where you can fire at approaching enemies. After opening the first lock on a double-lock door, explode a Flash Bomb to rid the screen of monsters, and immediately go for the second key."
— Matt Lieber

Stargate/Defender

"When you see a cluster of Swarmers approaching (on the Scanner), don't thrust; move up and down and fire repeatedly. Many of the Swarmers will be destroyed; you can duck under the strays."
— Neal Bankes

Super Pac-Man

"Always pick up the Keys first to unlock the gates to the Energizers. Don't be greedy with the Super-Energizers; save them until last to clear the board."
— Michael Kozin

Time Pilot

"The heat-seeking missiles can be eluded by piloting your aircraft in a roughly circular pattern. This maneuver 'disorganizes' the missiles' guidance system."
— Donald Powell

Editor's note: the enthusiastic response to Alfred Nota's call for help with Atari's Raiders of the Lost Ark *game was much appreciated. Special thanks go to Paul Harbach, David Brady, Jon Rawlinson, Bruce Taylor, Greg Evans, and Matt Towler for their detailed and hard-won advice.*

We've selected two letters for Alfred to peruse.

To the Editor:

In your April issue of *Videogaming Illustrated,* Alfred Nota asks what to do when inside the Mesa tower. What he needs is a shovel to dig at the pile at the bottom of the screen. If he has the right tower he will win the game.

Now what I want to know is: does anyone have any suggestions on how to play *Swordquest: Earthworld?*

Robert Plourde Jr.
Fall River, MA

To the Editor:

In the April issue of your magazine, a reader named Alfred Nota wrote in to ask how to beat *Raiders of the Lost Ark* by Atari.

I will start at the beginning. In the Entrance Room grab the whip, and go to the room below, the Market Place. Move Indy onto the parachute, not the flute as the instructions suggest, without touching the Sheik. Move the dot to the gold, and press the button on the left joystick. You now have the parachute. Next move Indy to the basket on the upper left of the screen. You now have a grenade. Quickly move to the basket on the lower right. You now have the key. Stay on this basket until you get the medallion. This item is *not* in the instruction booklet. It looks like a circle with a dot in the center. Getting the medallion may take a while, so dodge the snake whenever he comes down.

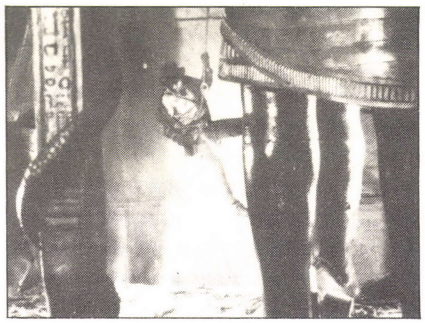
When you have the medallion, move the dot beneath the grenade with the left joystick. Move Indy back into the Entrance Room, but beware of the snake. He will be in the same position in the Entrance Room as he is in the Marketplace. When you get to the Entrance Room, run up the side of the right wall, and press the button on the right joystick when you are about midway to the top. You must be moving to release the grenade. Run quickly down and out of the room so you won't be destroyed by the grenade. As soon as you are in the marketplace, move up to the Entrance Room again. There will be a black hole in the wall where you left your grenade. Go into it. You are now in the Temple Entrance.

Go through the opening at the lower right. You will then be in the dungeon at the left in the Room of the Shining Light. Move the yellow dot beneath the whip, and fire a hole in the lowest portion of the wall on your right. Be careful not to touch the walls or you will appear in the middle of the dungeon again with no hole in the wall. Go through the hole, and over to the wall on the right being sure not to touch anything. Go through the hidden door about three quarters of the way up on this wall. You are now in the Treasure Room. Grab the coins in the center. Now the snake and a treasure will appear. If the treasure is the Ankh, take it. Otherwise leave the room three quarters of the way up on the left wall. Keep repeating this until you get the Ankh. It may take a long time, or you may be lucky enough to get it on your first try. At this time you must have two gold sacks, one Ankh, one key, one medallion, but *not* the whip.

"Take a deep breath and jump off the mesa. Steer Indy to the opening under the branch. If Indy hits the branch, he will fall and die."

When you have the Ankh, go back into the Room of the Shining Light. Move the dot beneath the Ankh, and press the button on the right joystick. You are now on the Mesa Field. Push the right joystick up until the white dot circling around you goes over a mesa below you. Press the button on the right joystick. Keep doing this until you reach the bottom.

If you fall off before reaching the bottom, *quickly* press the button on the right joystick, and you will be transported back to the Mesa Field.



When you reach the bottom, press the button on the left joystick, dropping the Ankh. Move the yellow dot beneath the key, center yourself on the mesa, and go down. You will be on a small strip. Go down until you see the map unfold on your right. Move to the right when the map is on the screen. Center yourself *exactly* in the middle or you will die. When you are centered, move the yellow dot to the medallion, and wait. It takes about two minutes for the sun to appear at the top of the screen. A small white dot will flash on the mesa where the ark is located. Move the yellow dot beneath the key, and move left again until you are on the strip.

Go down to the next screen. Watch out for the "thieves" roaming back and forth. You will not be able to see Indy unless you move right. *Do not* touch the "thieves" or they will take some of your items. Go to the bottom right of the screen. There is a secret door in the lower wall. Go through it, and you are in the Black Market. Move left onto the shovel and move the yellow dot to one of your money sacks. Press the button on the left joystick, and move the yellow dot to your other money sack, and press the button on the left joystick. You now have a shovel. Go out through the top of the right wall and you are in the Marketplace again.

Go out the hole in the wall again, and go get the Ankh as before. You must now have one Ankh, one parachute, one shovel. Press the button as before to get to the Mesa Field again. Now you must go to the Mesa that has the ark (you saw this in the map room). Press the button on the left joystick to drop the Ankh.

Now for the hard part. Move the dot to the parachute. Take a deep breath and jump off the mesa. Press the button on the right joystick *quickly* and steer Indy to the opening under the branch. If Indy hits the branch, he will fall and die. If you make it into the opening, press the button on the left joystick, dropping the parachute. Move Indy down to the mound at the bottom, dodging the "thieves" as you go. Move the dot to the shovel, and go back and forth across the mound, pressing the button on the right joystick as you pass over it. Shortly you will go to the Well of the Souls with the ark at the top of the screen. Congratulations! You have won.

Eric Kayser
Santa Barbara, CA

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RAIDERS

Continued from page 43

unusual just a couple of years ago, its crazy comic style fits in perfectly with today's nonsensibilities.

Meltdown Mania

Nintendo's was a lesson well learned. Almost all the major manufacturing companies are discovering new home video life for the quality games that don't quite make it in the arcade. But Gottlieb Amusement Games learned its lesson the hard way. After a very shaky start that left the company on the brink of dropping the concept of videogames completely, they came out with *Reactor* — a machine with a great concept, great sound and great graphics.

The concept was of a nuclear power plant nearing meltdown. It was the player's responsibility to prevent that disaster. Although the game seemed to have it all, players weren't as enthusiastic as the company. Veteran players and industry insiders blame the machine's middling success on what is termed the "difficulty curve."

Reactor, simply, was too hard a game to learn. It took too many quarters to get the hang of it. That alone would not scare away the dedicated player, but the machine's kiss of death was that it became too easy to play once that first hurtle was overcome. It was no longer a challenge. The schematic for a successful machine is "easy to learn, hard to play." *Reactor's* effect was just the opposite.

To its credit, Gottlieb did not let *Reactor* get them down. Parker Brothers translated it into a home game while the manufacturer reversed the difficulty curve on *Q-Bert,* their greatest success so far. It is instantly obvious what the player has to do there, but it becomes increasingly difficult to play, involving the player all the more and inspiring him/her to keep trying.

The Japanese Connection

Q-Bert was very similar to *Treasure Island,* a machine created by Data East Incorporated in 1982. It was a delightful game in which a tiny explorer attempts to climb up a sinking island collecting treasure as monsters assail him from all sides. The reason it did not set arcades aflame was that its manufacturer was too busy making other surefire winners.

"We were just ready to introduce it," says Bob Lloyd, vice-president and general manager of the company, "when *Burger Time* hit. We got ready to release it again, when *Bump 'N' Jump* hit, which proved to be an even greater success than *Burger Time.* We licensed both those games to Midway while retaining the rights to them but, meanwhile, we're still trying to fit *Treasure Island* in. I'm happy to say that it has been licensed for the home videogame market already."

Data East is in the rare position of having a plethora of hits on its hands. Unlike many other companies, this international corporation doesn't have to struggle unduly to find profitable product. Lloyd attributes their cat-bird-seat position to two things — Japan and cassettes. "We are a subsidiary of a Japanese parent company (Data East Corp.). We have over thirty thousand pieces of equipment in the field and over sixty game developers working. So we get a great many games to review here in the states.

The schematic for a successful machine is: "easy to learn, hard to play." Reactor's effect was just the opposite, unfortunately.

"While other companies throw four or five games out into the marketplace for testing, then go into mass production on whichever one sticks — swallowing the losses in developing the other three or four — we can afford to develop one or two which we feel strongly about. That may be the reason our games work as well as they do. And since our machines are interchangeable — that is, we have the 'Deco Cassette System' — a machine can be a *Burger Time* one day and a *Bump 'N' Jump* the next."

Even though their games can be replaced by taking out one programmed cassette and replacing it with another, not all their games can be a *Burger Time* or even a *Treasure Island.* Another promising Data East machine of last year called *Disco No. 1* wound up in the corporate dump. "Now there's a good example of a game that didn't do as well as it might have," Lloyd admits. "It was a good game with a good concept that failed because of its dated theme."

The player controlled a "playboy" who had to dance squares around boogying "disco girls" and a "Beauty Queen" to gain points while being chased by a bouncer on roller skates and a broom-swinging witch who could wipe him out. It was an entertaining game with speedy action. But the rub was in the title and the characters.

"If you had a dollar for every twelve to fifteen year old who has said 'disco sucks' you'd be a millionaire," Lloyd sighs. "If it had come out this year, I'm sure we would have changed the title and characters since we have refined our testing procedures recently. But *Disco No. 1* didn't, so we didn't." Lloyd and Data East are not overly upset, however. They have had involving games like *Manhattan* and challenging games like *Pro Golf* to keep them warm.

Life On The Midway

If there was any problem with *Pro Golf,* it would be the same problem that afflicted the Midway Manufacturing Company's *Shuffleboard* and *Bowling Alley.* "Believe it or not," says executive Stan Jarocki, "their big problem was that they were too realistic. They were the best efforts of this company at the time (1978) in terms of sight, sound and realism of play. And in both cases, they were realistic sports games that played too long for twenty-five cents.

"Now that might not bother the player too much, but an arcade operator expects a fair return on his investment, so he doesn't want a game that gives his patrons too much for their money." Midway usually gives everyone concerned good games for their hard earned cash — setting the stage for the videogame boom with *Space Invaders* and *Pac-Man* — but before those two ground-breakers appeared, the company did their best with the rarely played *Space Walk* and *Dog Patch.*

"You sure know how to hurt a guy!" Jarocki laughs. "We thought we had thrown those two games over our shoulders and forgotten about them. And now you had to go opening old wounds." Midway wasn't seriously injured by the pair of videogames, but in light of such subsequent successes as *Gorf* and *Tron,* the initial machines look overly simplistic. *Space Walk* was a follow-up to Midway's *Clowns,*

wherein a circus performer would be catapulted by a teeterboard so he could pop balloons for points. The outer space game replaced the clowns with astronauts.

Dog Patch recreated the Hatfield and McCoy hillbilly feud in a cabinet painted to look like a rural outhouse complete with a quarter-moon on the door. Instead of blasting each other, the object was to volley a video tin can in mid-air for as long as possible, while occasionally downing a flying duck for extra points.

"Both were cute games, but did not meet with much success in the marketplace," Jarocki states. "But there are always games that are unique in terms of concept and graphics that never get their due. *Kickman* was one such game, as was *Bosconian,* which won awards from consumers' publications. We felt they both had great possibilities but they met with only moderate success. Actually, a lot is dependent on timing. The concept, game play and graphics were all excellent, yet the machines were still overshadowed by the likes of our other releases, like *Galaga* and *Ms. Pac-Man.* It's a strange business sometimes."

The Pit, The Pipes, And The Princess

No one could agree with Jarocki's sentiments more than Cinematronics, Nichibutsu, and Centuri Incorporated. All three companies produced initially exciting and complex games that turned out to be just too difficult in the long run. At the very top of the difficulty curve, there is a point at which the player gives up in disgust rather than pump another quarter into the slot. This trio of manufacturers share that situation with three otherwise promising machines.

Cinematronics followed their successful *Space Wars, Star Castle* and *Rip Off* with *Jack the Giant Killer,* a cartoon story game with five screens and twelve levels of difficulty. It was the videogame version of the classic fairy tale complete with magic beans, the beanstalk, the goose that laid golden eggs, the singing harp, a bag of gold, and an imperiled princess. As if that wasn't enough, the screen was filled with attacking woodpeckers, caterpillars, moths, bees, lions, cats, mice, clouds, leaves, rocks and magic lamps.

This was a videogame for seasoned experts with a lot of quarters on hand. While *Jack the Giant Killer* had a happy ending, with the Princess being rescued, so much had to be done beforehand that a successful completion of the story cycle seemed impossible.

Frisky Tom was Nichibutsu's complicated contribution to the field after distributing *Moon Creta, Moon Alien,* and *Moon Shuttle.* Here the title character is a plumber who watches over a system of pipes sabotaged by five bomb building mice. The Molar, Mean, Megaton, and Kleptó mice cause water leaks in the pipe network while the Pyro Mouse sets a bomb beside an ever-emptying bathtub. Tom must repair the leaks and put out the fuses.

Finally, there was Centuri's *The Pit,* an engaging one-screen game that challenged the player with a series of dangers. The player controls an astronaut who is dropped off by a flying saucer in the upper left corner of the screen. In the upper right corner is an enemy tank which unloads killer robots. Between the two is a mountain the tank starts to chip away with cannon blasts.

The astronaut must collect at least one gem in a subterranean vault lined with falling missiles by burrowing through the ground, avoiding falling rocks and blasting the enemy robots before the tank destroys the mountain, forcing the flying saucer to escape. Even if the astronaut collects the gem in time, the only way out is through the lair of a monster beneath a sliding floor.

"There are a few reasons *The Pit* didn't hit," maintains Peter Nasca, Centuri's public relations official. "There were several games with similar themes preceding it that captured the market, primarily Atari's *Dig Dug.* And it was released at a time when the marketplace was flooded with all kinds of machines. Smart manufacturers are now very selective about what product they choose to distribute and how they distribute it.

Truly gone are the glorious days of a mere thirty-six months ago when game manufacturers could risk producing a machine that wasn't thoroughly tested.

But do not lose heart, lost arcade explorers. The newly burgeoning world of "Deco cassettes," "game kits" which allow companies to change weak games without changing the cabinet, and home video cartridges will insure that quirky, crazy, specialty games will still have a place in the entertainment industry.

POPEYE

Continued from page 45

idly. Any that don't fall inward (that is, toward the ship) can be secured by moving Popeye to the edge of a ledge and using the action button to cause Popeye to grab them.

In this screen, the sea hawk (or Vulture) poses an additional threat. It can be knocked out cold by a well-timed punch, but not while Popeye is riding the moving platform. The platform moves so quickly it is more likely Popeye will simply crash into the bird. Wait for the hawk on either side of the platform, even if letters could be picked up by riding across it.

The hawk will also fly diagonally from bottom to top when Popeye is scurrying about the lower reaches of the ship's deck, picking up letters. Be careful! Move Popeye away from the hawk unless it is approaching *laterally,* during which time it can be knocked out by a solid punch from the action button.

Brutus, of course, is still alive and well in Screen Three, and does most of his damage by getting in the way — running up and down the ship's ladders, jumping ledges — thus causing Popeye to retreat to the sides of the boat and climb up and down ladders. Since most of the letters required to complete this screen fall inward, toward the middle of the boat, it becomes difficult at times to reach them. Try to stay near the moving platform as much as possible and retrieve the letters as they float by.

Beyond Screen Three

Although *Popeye* is comprised of only the three screens described above, gameplay repeats in screen order at a more intense pace. But in addition, the old Sea Hag will now begin tossing lethal skulls at Popeye. The skulls can be punched out of existence, or avoided. They also bounce (unlike bottles), but the astute player can destroy the bouncing skulls as well as Brutus' bottle barrage by skillfully shifting the joystick back and forth, as the situation dictates.

Players who endure beyond Screen Three can be justly proud of themselves. But for those who fail to make it that far, it is well to remember the immortal words of Popeye himself:

"I am what I am and that's all that I am.

"I'm Popeye the sailor man."

FRANKENSTEIN

Continued from page 27

adventure. When trying for the second one, it may be necessary to employ a strategem which, at first blush, will appear eccentric, even suicidal.

When preparing to launch oneself to the second block, it is necessary to place oneself on the opposite side of the block facing the wrong way. That is to say, if you are traveling to the right, move to the left side of the first block and face left. Now jump to the right. This will land you on the far edge of the next block. Repeat this maneuver to land on the next block. From there, it is a straight jump to the shore. Returning, jump straight to the first block, then reverse yourself to get to the next two blocks. Again, the jump to shore is straight on.

When the blocks are moving it is easy to walk on to the big block from the left shore, but you must jump on and off the right side. With the small blocks, walk on from the left, but wait until the blocks have traveled all the way to the far side before jumping. When the blocks start back, stand in the center of the first block, then jump. You will find yourself on the third block. Do not attempt to jump to the second block, you will only tumble into the acid vat. Wait until you are approaching the far shore, then jump straight onto the edge, as the blocks do not touch the shore on this side.

Use these same tactics with the disappearing blocks, but do not dawdle! The blocks will vanish after a pass or two. In a rare, sporting gesture, Frankenstein has designed the blocks so that they warn you: they flash from red to orange when they are about to disappear.

Overall, it is best to ignore your store of life force units. Concentrate on going as quickly as possible. Time is the enemy. Of what use is life force if that monster is loose, I ask you? But do not go *too* quickly. It might be best to let a tarantula touch you, bringing on temporary paralysis, rather than hastily vaulting it. Often you will plummet through a trap door and into the acid.

To save time, you may employ a number of shortcuts, albeit hazardous ones. In the quest for the first brick, after you have jumped the first trap door, turn around and walk off the edge. Admittedly, I have seen many a good soul take an acid bath on this one, but with practice you should land on the block below.

In the quest for brick two, if you run and jump precisely in the center of the trap door you should land on the block below. In the quest for brick three, this maneuver is a tad easier because the block is moving. Wait until the block is beneath you and take the plunge.

Whether to use this maneuver to attain brick four, I cannot advise you. The moving blocks cover the entire area in question, but they are so very small! For myself, I ran the normal course. But then again, I'm dying, am I not?

For the questing of bricks five, six and seven, you may jump through any of the three trap doors and have a chance of landing on a block.

As to the swarm of bats, my only advice is: keep moving! Generally staying in the center of the corridor and as far forward as the bats will allow you, scoot left and right in staccato fashion.

IV. Epilogue.

Now I must put down my quill. By inking these instructions — and submitting my veins to the bats — my life force has been nearly drained.

Oh look there! The monster is loose. It is lumbering towards me. The game is over, for me.

Now it is up to you, dear reader.

GALAXIAN

Continued from page 29

This way their ships offer a wider target for your guns.

A second strategy is to work the formation as if it was *Space Invaders*. That is to say, start at one side of the formation, and blow away the entire column. After one column is taken care of, move on to the next. In this manner you would deal with attackers only when they come close enough to threaten you.

Or the player can alternate sides. After eliminating the end column of one side, shift quickly to the opposite side and fire. Then scoot back to the first side, and repeat until all Galaxians have fallen. This will tend to confuse incoming aliens, and you will be less likely to be shot.

A third strategy would be to blast away at any and all enemy ships, leaving behind only the flagships and their escorts. This way you can wait until they make their raid to shoot them out of the sky, scoring higher points. By far, this seems to be the best way of staying alive.

Rapid fire should be used in the beginning of any screen when it is full of Galaxians. Since there are so many of the alien beasties, a stray shot can not help but hit something. When the number of attackers dwindles, employ single fire. With only a few ships to shoot, rapid fire will only be a hindrance.

When you are playing waves one and two and you need a rest, run to the extreme right or left. You should be safe for a few moments, as Galaxians can not reach that far laterally. In the higher levels, stay away from the corners, or you will find yourself trapped.

Comment

The graphics on the home version of *Galaxian*, though not as good as the arcade or the 5200 versions, are compelling and colorful. It should be noted, however, that the game contains as many similarities to, as differences from, *Space Invaders*.

One *Galaxian* bonus is the advanced levels. A player who is able to achieve high scores is not forced to play the slower versions to arrive at his/her own skill level.

Galaxian is the fifth in the series of cartridges that are being packaged with the DC *Atari Force* Comic.

PREVIEW

Continued from page 38

Donkey Kong Jr.

Object

Mario has managed to lock Donkey Kong in a cage: it's the task of young Donkey Kong to rescue him.

There are three screens. In the first, the player must guide Junior from vines to platforms, proceeding ever-upward. The ape is pursued by Snapjaws, which can only be eliminated if Donkey Kong Jr. plucks fruit from a vine and drops it on their head.

In the second screen, the monkey must ascend lengths of chain and push keys into the locks of the cage, all the while avoiding Snapjaws and Nitpicker birds. Finally, on screen three, Junior must jump from platform to platform — some of them moving — grasping chains to ascend as necessary, avoiding eggs and deadly Stookybirds. After completing this level, the screens repeat at a more hectic pace.

At any time, if Donkey Kong Jr. jumps at a vine or platform and misses, or is struck by an enemy, that life is lost.

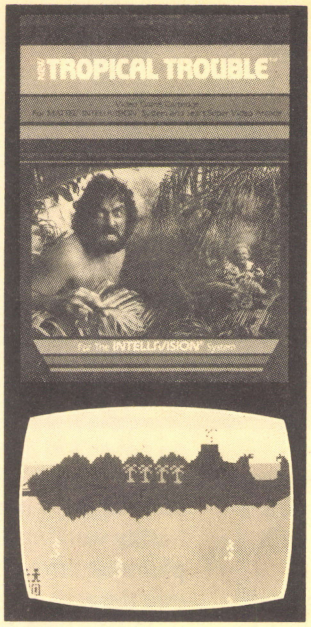
E.C.M.: Though Coleco has pared some screens from the arcade game for their ColecoVision edition, this is still a commendable adaptation. Virtually all of the detail in the three screens has made the transition intact, and fans of the game will be very pleased.

There's not much more to say: I'm simply not a fan of *Donkey Kong Jr.* It's not as challenging as *Donkey Kong* and, while the programmers are to be commended for coming up with a new scenario and inventive troubles for the little simian, they're more clever than challenging. For example: jumping barrels in *Donkey Kong* was always a matter of some urgency. You leapt or perished. Here, with a Snapjaw on your tail, there is usually the option of retreating to a previous platform, scurrying up a vine, switching vines, or lunging for a fruit. Options are great for a strategy game. For a jump-and-climb program, they're just easy-outs.

J.C.: First, my belated commendations to Nintendo, which created the original arcade game. This is a brilliant extension of the *Donkey Kong* theme. I always resented the way *Stargate* was a "padded" *Defender;* this game took off in new and ingenious directions.

Donkey Kong Jr. is a wonderful home videogame. It has charm and personality and, while the early screens *do* make for relatively easy play — most players make it to the third level of this game in far less time than it took to get to the second screen of *Donkey Kong* — the latter screens are a royal rash.

The animation is an improvement over *Donkey Kong,* Coleco's best since the pivoting bear in *Carnival.* All in all, a splendid cartridge for the entire family.



Tropical Trouble

Object

Clarence and Doris have been shipwrecked on a desolate isle — but they're not alone. The Beach Bruiser is hulking about and, delivering a solid boot to Clarence's seat, knocks him for a loop while abducting poor Doris.

Clarence sets out after her, running around and leaping over various obstacles, such as steaming balls of lava spit from volcanoes, clams, ferns, boulders, snakes, and coconuts hurled by an obnoxious monkey.

The player is awarded points for each of Doris' tossed Hankies which are retrieved, and for each *moving* object encountered in Clarence's "flush" stage — those few seconds of glee after grabbing each Hankie.

Points are also granted for reaching Doris on the right side of the scrolling screen, at which point the game shifts to a new panorama. At any point in the game, if Clarence gets tangled up in obstacles and is thus slowed so that the left side of the screen scrolls into him, he loses one of his four lives.

Finally confronting Bruiser on a high bridge, Clarence must jump rocks thrown by the felon; reaching him, our hero tosses Bruiser into the brine.

J.C.: A solid if not extraordinary cartridge from Imagic, a game which will appeal primarily to fans of *Pitfall.*

Graphically, this is the better game, as is the case with most Intellivision cartridges vs. those for the 2600. The scrolling screen has more variety, changing from beach to jungle to volcanic expanse; the animation of Clarence, the monkey, and the obstacles are very good.

Playwise, however, it's just not provocative enough.

The primary difference between the cartridges in terms of gameplay are the stationary obstacles in *Tropical Trouble.* Strewn about the screen, they form maze-like routes through which Clarence must maneuver, while jumping or circumnavigating the moving dangers. Personally, after a while I found this flavorless. I can't say it was boring, since there are always moving obstacles to keep you on your toes, and there are the Hankies to gather. It's just that I much prefer the sheer variety of the *Pitfall* hazards.

E.C.M.: Two issues ago, I complained that Imagic's Intellivision cartridge *Beauty and the Beast* had good characterization, some interesting danger situations, but very little in the way of play variety.

Ditto and ditto for *Tropical Trouble.* Basically, all you're doing is hustling your way through a cluttered field.

One look at the monkey screen above tells the whole story. If that kind of dodge-through-the-crowd play appeals to you, you'll have a great time. If you like your software more versatile, you'll tire of this handsome but one-note game rather quickly.

Utopia

Object

Two players are the rulers of opposing lands, each struggling to prosper in the face of adversity.

Plaguing the island kingdoms are rain, pirate ships, tropical storms and hurricanes, and rebel soldiers — the latter being financed by the opposing player.

Through it all, the ruler must replenish her/his treasury through fishing, factories, and farms, income from which permits the raising of forts, schools, hospitals, PT boats to attack the other player, more farms, and so forth.

The screen does not change from its basic overhead view of the islands.

The winner is that player who scores the most points, points earned as the quality-of-life provided by your rule improves. The player can set virtually any time-limit on play, from a few seconds to an hour or more.

One person alone can also play *Utopia,* trying to score in the face of natural disasters.

E.C.M.: This is primarily an intellectual game, although the players *do* have to race their fishing boats over to the schools which appear now-and-then.

Utopia is one of the most original games on the market. Designed for the Intellivision console, it's not convoluted like *Bomb Squad:* the player has the freedom to make it as simple or as complex as he or she wishes. You can build a militaristic society, heavy with forts; or you can try to create a civilization where there is an equal blend of arms and education. You can skip the crops and rely solely on fish, counting on the fickleness of the waters; or you can emphasize crops and hope that the storms are not too severe. Or you can do both.

In short, there is no end to play-combinations — which will, of course, constantly be modified because of what your opponent does.

Action fans will find nothing of interest here. But adults and all those interested in videogames which have boardgame-like dimension will revel in *Utopia.*

Despite what this month's mail indicates (see *Input),* I am confident that videogame players enjoy provocative and involving board games if the player's friends are of like mind.

J.C.: This game is a marvel, like chess without the squares. The everchanging circumstances require players to remain constantly alert, and they must plan their strategies well in advance.

E.C. has said it all as far as the quality of *Utopia* is concerned, though I urge parents to get and play this game with their children. Not only is it fun, but it's a great way to learn about finances and responsibility to others.

Mattel is to be congratulated for taking a chance with an intelligent game of this type. Bravo!

EggoMania

Object

A feathered fowl is laying eggs from above, and you must direct your bear to catch them in its hat. Miss, and the ground fills with yolk: when the yolk rises above the hat, the game ends.

Catch every egg in a wave and you get to spit them back out at the bird. Strike the moving chicken and some of the spilled egg is cleaned up.

The difficulty switch controls the width of the hat in this 2600 paddle game.

J.C.: If this cartridge had been released before *Kaboom!,* I'd have declared it a work of art. As it is, *EggoMania* is still a very good reworking of the theme.

The falling eggs don't move in quite the nefarious patterns of the bombs in *Kaboom!,* but they're still difficult to catch. And the variation of being able to shoot back at the object-dropper is very rewarding. Where the game really glows, however, is in the characterization.

The chicken dances merrily overhead while losing eggs, and does an absolutely magnificent jig when you miss an egg. But the best part is when you turntables and blow the bird away. The animal gets its comeuppance in some of the most amusing graphics ever created for the Atari 2600.

The yellow mess which accrues on the floor from missed eggs is another nice touch, and the chance to decrease your handicap by having it cleaned up for striking the bird "eggs" you on to success.

The musical accompaniment is also superb.

EggoMania is U.S. Games best work to date.

E.C.M.: This is a nominally pleasant bit of fluff which lacks the intensity of *Kaboom!.* The game isn't nearly as taxing, and the accumulating yolk is worthless since it doesn't slow your bear down. I'll take the hazard of losing a bucket in *Kaboom!* any day to the pointless slop in *EggoMania.*

As for the dancing and the music, after about ten minutes I shut off the sound, the ditty became *that* annoying; would that I could have turned off the picture as well.

If you're going to do something which is "like" another game, you've got to do it better or there's no point in having done it at all. In the case of *EggoMania,* it would have been better left unhatched.

Kids may be amused for a while, but that's as far as this one goes.

U.S. Games deserves credit for their attempts to appeal to children in their games. No one else is doing so on a consistent basis.

Problems arise, however, when a game is targeted strictly for children, and I'm not talking about problems with sales. The tendency in adults is to condescend to children or to think of them as a separate species. This impairs creativity in both game designer and player.

Killer Satellites

Object

A swarm of destructive satellites has been programmed to destroy the earth. They have postponed their attack until now, when a meteorite storm is bombarding the planet and wearing down its force field.

The player controls a rocket ship which streaks over earth's force field and blasts the oncoming satellites. Meteorites cannot be destroyed, although contact with them will vaporize the player's ship, as will contact with the force field.

Most games from Starpath contain a variety of monitors and dials, and *Killer Satellites* is no exception. The player must watch his/her fuel level, lasergun temperature, and a global radar scanner.

Play begins with an allotment of six ships, each introduced with the "charge" ditty familiar to sports fans.

E.C.M.: This is not exactly what the world needs now: another horizontal streak-and-shoot game. But this is the first of its kind in the Starpath collection; I suppose they *are* entitled to a standard or two.

What I enjoyed most about the game was the speed of my ship. I wasted a number of my reserve ships just to enjoy the sensation of streaking hell-for-leather across the sky. Unfortunately, this speed capacity is not incorporated into gameplay. As soon as you get a head of steam going, you have to stop and deal with the enemy.

The graphics are good and the ship's maneuverability excellent, as in all Starpath games. But the laser overheat monitor is an annoyance. Space game players like to *shoot;* they don't want to be forced to ration their salvos.

J.C.: I disagree that the restricted fire spoils gameplay. I welcome the introduction of strategy into the field.

Killer Satellites is as fast as the player chooses: game speed can be set anywhere from one (slow going) to ninety-five, which is challenging indeed.

While *Killer Satellites* brings nothing new to the world of flight-combat games, it's quite playable on its own terms.

Space Panic

Object

Your spaceperson is trapped in catacombs on another world. There, the intrepid space pioneer has put down ladders to gain access to every level.

Suddenly, materializing out of the ether, undulating Space Monsters assault the explorer. They proceed slowly from side to side, occasionally using the ladders to go to another level. The only way to stop them is for the adventurer to dig holes into which the creatures tumble, then quickly bury them.

If the Space Monster escapes before it can be interred, it metamorphoses from a Creature (red) to a Boss (green). That means the space person has to drop the creature through two levels of holes, having dug one directly atop (or below) the other. If the Boss claws its way from the hole before it can be entombed, it becomes a Don (blue) and must be plummeted three levels.

The player must rid each wave of its Space Monster before the space person's limited stores of oxygen are depleted.

J.C. Although I confess some disappointment with the neighborhood in which the game is set — it's *very* bland, hardly an improvement over the sparse environment of *Pick Axe Pete* — and the animation of the space person is somewhat stilted due to the bulky spacesuit, gameplay *is* excellent. Cocky videogamers who scoop up the controls and smugly pass through levels one and two (three and five Space Monsters, respectively) without losing their astronaut will more often than not lose their supply of three-to-five (depending upon skill level) adventurers in the crowded corridors of level three.

I have only this to say, not so much about *Space Panic* but to Coleco: take a hint from Activision and Imagic and start inventing more of your own games. The space theme is getting tired, and while it's valid to have licenses for recognition in the marketplace, so many of the licenses picked up nearly two years ago, at the height of the *Space Invaders-Asteroids-Missile Command* boom, seem dated now.

No matter how good gameplay may be, the ink of yesterday's newsprint gives them a dated feel.

E.C.M.: Jim's comments are not without some merit, but they come from someone who lives with videogames day-in and day-out. Most consumers do not, so the space theme, to them, is as fresh as *Return of the Jedi.* More adventures in the same setting, and there's nothing wrong with that.

Having offered that pronunciamento, however, I must admit that one's first reaction might well be, instead, "Holy Deja Vu, Batman, *another Donkey Kong* spinoff." After all, we've got the ladders, the five stories, the protagonist's bopping action (cleverly disguised as burying the Space Monster . . .).

But — just play the game for a few rounds and you'll see that this adaptation of Universal's arcade game is no mere aping of the other attraction.

Gameplay is good, the Creatures easy enough to sink, but the Boss and Don are real balloon-busters. However, as with so many of the ColecoVision games, it's the ambience which helps to make this so engrossing. The music is like nothing you've ever heard in a videogame, splendidly ethereal, and the animation is superb. Particularly inventive are such touches as having the astronaut's head go blue and sink into the spacesuit, the poor protagonist reeling, whenever the oxygen runs out.

And the strategy-possibilities are endless. Dropping Space Monsters

atop other Space Monsters rids you of two in one shot and earns extra points; some players prefer to let the Don's evolve since they, too, are worth more.

Coleco continues to bat a thousand!

Polaris

Object

You've been appointed commander of a Polaris class nuclear submarine. Your mission is to shoot down a wave of enemy planes and dive bombers and, completing that assignment, move on to navigate through mine-filled channels.

The first phase of the battle is a cutaway of the sea, with the player firing up at the planes. The second phase is an overhead view looking down at the submarine moving through the narrow channels.

E.C.M.: Remember the old bromide your elders used to try and sell you, "If you can't say anything nice, don't say anything at all." If I followed that rule, there would be an empty inch below.

Polaris is so archaic it hurts. Even by 2600 standards, this is tired going. The opening phase is straight out of Atari's *Air-Sea Battle*, which was released *years* ago: I can't believe that Tigervision couldn't do more with the state-of-the-art than come up with cardboard-cutout ships and little pellets for bullets.

As for the channel phase, it's a pale, pale shadow of themes better expressed in *River Raid* and *Fantastic Voyage*.

Avoid this one, battle fans. Like Tigervision's *King Kong*, the only snap, crackle, and pop is in the packaging.

J.C.: While I don't blame Tigervision for trying to consolidate two proven themes into one game — which they've done very neatly under the Polaris banner — I agree with E.C. that the result is a game which does neither justice.

The channel phase offers some extremely tortuous passages, but that in itself is not enough to recommend this game. A major disappointment.

Ice Trek

Object

The player, as the epic hero Vali, must move through three icy screens in order to liberate the Aurora Borealis from the Ice Palace of Kaltkron the Terrible.

The first screen is a cross-country odyssey on skis in which the hero/player must either avoid roaming caribou or club them with an axe while simultaneously avoiding the arrows of the Wildlife Goddess; the second screen presents our hero with the task of hooking icebergs, hauling them to the bottom of the screen and constructing an ice bridge, ready all the while to torch floes which pass too near the span; such wandering floes will destroy the bridge. The third screen is the Ice Castle of Kalktron the Terrible, to which the player must lay siege with volleys of fireballs on the castle itself.

There are several difficulty levels.

J.C.: One of the most impressive home videogames on the market; Intellivision owners will rejoice.

The caribou screen is fun even if it *is* recycled *Stampede*, and storming the castle is a real challenge. However, it's the ice bridge screen which makes this cartridge *more* than worth the price of purchase. The sound effects in particular are excellent. No doubt about it: you'll feel the chill in *Ice Trek*, but *love* it just the same.

E.C.M.: This *is* truly one of the best games you can buy for Intellivision, though somewhat slower than, say, *Astroblast* and *Space Hawk*. Unless you need the thrills coming your way at light speed, you'll have a great time.

My one complaint, and it's directed at Imagic rather than the game: why the hell does the axe have to *kill* the caribou? With all the furor over slaying animals for sport and commerce (from whales to harp seals), the designers *could* have simply rendered the deer unconscious. This serious lapse of good taste and humanity gets my vigorous thumbs-down.

Dracula

Object

The sanguine count rises from his coffin at sunset, scouring the streets for fresh victims. If none are about, he must look for eyes in building windows, then lure victims out by passing in front of their door.

Dracula is pursued by constables, vultures, and wolves. He can avoid the wolf by turning into a bat, and elude the feathered foe by turning into human form.

The constable is constantly flinging wooden stakes at the vampire: if these strike home the count is paralyzed for a time, costing him time. The only way to stop a constable is by turning a victim into a zombie. This is done by using the right Intellivision action button. The left button simply kills the victims. Both tacks win the Dracula player blood *and* points.

Dracula must return to his coffin by sunrise; the time of night is registered at the bottom of the screen. Dracula perishes when caught by the vulture, when his blood runs out, or when the sun finds him still prowling the city streets.

A colorful urban vista scrolls from side to side as you play.

J.C.: A very imaginative game from Imagic, one which play is wonderfully multifaceted. In the two player mode, one participant is the victim and the other is the count, the two switching parts every night. Fleeing or pursuing is a matter of using the disc to race your figure up and down, to and fro along the pavement.

In one or two player games, the vampire has his hands full. He's running around to put the bite on a victim, at the same time avoiding the stakes, vulture, and wolf *and* hurrying to get enough blood before dawn. Becoming a bat allows Dracula to travel faster — but then there's always the nagging vulture.

The graphics are very clever, particularly the rising moon at the beginning of the game, and the way the count bares his fangs when biting someone in the neck. And sloppy players take note: if you don't place your fangs squarely in the back of the victim's neck, you won't get the blood or points.

In the one player games, the computer controls the victim's movements and is no one's patsy.

Tough going, and great fun!

E.C.M.: I'll say this for Imagic: they've stayed closer to the Dracula legend than Data Age did with *Frankenstein's Monster.* However, I still find this game lacking in atmosphere — the misty, shadowed horror one associates with the king of the vampires.

As it stands, *Dracula* is a *good* Intellivision game. As J.C. noted, there are numerous obstacles to overcome, often many in tandem, and they *are* different from what you encounter in the average videogame. But I found *Dracula* slow-going, even at the "hard" level. The constable's stakes never come at rapid-fire speeds, and there always seemed to be enough time to amble back to the coffin before dawn.

A solid, unusual addition to the Intellivision library though, among the recent releases, not quite as dynamic as *Shark! Shark!*

Gorf

Object

This ColecoVision version of the arcade game pits the player's ship against alien vessels in a series of screens: *Astro Battle,* with marching ranks of descending invaders; *Laser Attack,* featuring bobbing and soaring ships which fire laser beams at the player; *Space Warp,* with starcraft spiraling from a space tunnel; and *Gorfian Flagship,* a battle to penetrate the hull of a parentship and strike at the core.

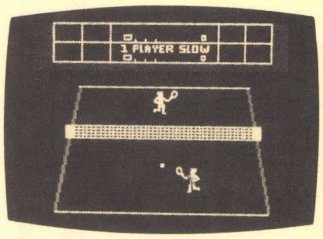
J.C.: I wasn't a fan of the arcade game, so it follows that this isn't my favorite ColecoVision cartridge. However, they have, as usual, done a commendable job interpreting a coin-operated game for home play.

Gorf gives you distilled *Space Invaders, Nexar,* and *Phoenix* all in one cartridge, a wild combination which forces you to change strategies from screen to screen to deal with each new challenge. That's going to appeal to videogamers who lose interest in a game once the patterns and m.o. of the characters becomes clear. But *Gorf* is still basically a slide-and-shoot game, and if that's your idea of fun you can't do better than this. The ColecoVision edition is, incidentally light years beyond the CBS 2600 edition of *Gorf.*

E.C.M.: As a rule, I love action games; of these, I prefer those which offer "stream of consciousness," such as *Cosmic Avenger* and *Zaxxon,* where one theme is maintained throughout, with more difficult variations.

Gorf is a good game, yet I found it distracting to have to keep shifting gears to adjust to each new vignette. Videogaming requires a certain amount of "getting into the groove," getting the feel of the enemy; each new screen of *Gorf* requires a fresh and distracting adjustment.

Still, as Jim points out, fans of the arcade game will be delighted. I suggest you track one down and spend a few quarters before investing in the home version.



RealSports Tennis

Object

The racket game, previously brought to the 2600 by Activision, now has an Atari-manufactured counterpart.

The player controls the serve, the direction of the player, and three kinds of shots: normal, lob, and smash. The player can also angle the shot, though the computer positions you for backhand or forehand.

J.C.: This is a great cartridge for those days when you can't get a partner either for tennis or videogames, since the computer takes the part of your opponent.

The graphics are well-done, right down to the shadow of the ball, and attention to tennis detail is generally good: the view is from over one player's shoulder, the athletes playing on alternate sides as in real-life.

In all, a very good video translation of the game. However, I *do* have one serious complaint: the net is insignificant in this cartridge. You play as though it weren't there. Whether you hit the ball over or through it doesn't matter. That tends to take some of the edge off the suspense. Activision got around this in *their* cartridge by having *all* shots arc lob-like over the net.

I recommend this less for videogame diehards than for casual owners who are looking for a familiar, down-to-earth game.

E.C.M.: Atari has beaten Activision in the videogame Wimbledon, producing the superior tennis cartridge. The graphics are more detailed, the figures more animated and the court more realistic, down to the scoreboard — on which, incidentally, the player's initials can be recorded — and the mesh of the net.

Not being a tennis fan, I enjoyed the game without prejudice. I found it very entertaining, and a refreshing break from shoot'em-ups. I've also got to commend Atari for the way they have the tennis-logo bouncing, ball-like, in the attract mode; and for giving us, in the computer, two of the finest tennis pros on earth.

Watching them play before switching on the game is not only enjoyable, but suggests some useful tactics.

THE 2600

Continued from page 23

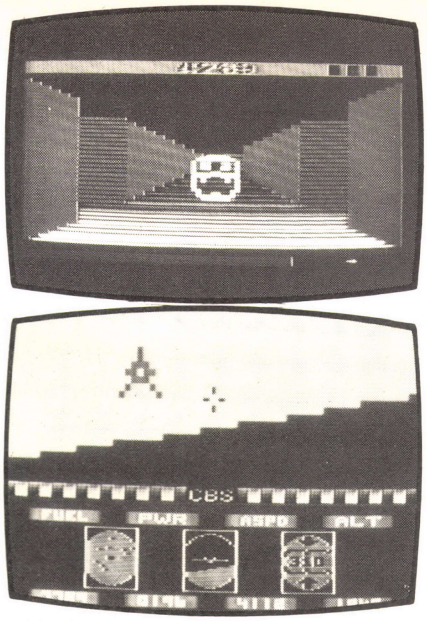
ColecoVision and the Atari 5200. I expect the prices to continue to fall. There is a confusion concerning the intersection or conflict of computers and videogames. There is no conflict. Advanced video systems *are* computers. Home computers like the TI/99, as they exist today, do not make good game playing systems. Home computers will be used primarily for information management and education, while the trade-up market for advanced game-playing systems will continue to grow.

Brian Dougherty, vice president of engineering, Imagic: In the opinion of the Yankee research group, home personal computers will pass videogames in an installed base by 1986. After that, there's a good chance that the computer will become a home appliance. As for the 2600, I would say that it has at least two years left. We are investors in a company called TVC which is planning to deliver software over the telephone to 2600 units. In addition, they have the capability of delivering electronic mail, doing some home banking and the like. So all of a sudden, the 2600 has the capability of becoming, in addition to a game machine, a low-cost terminal for doing home banking. That could certainly extend its two year life.

One other factor in prolonging the 2600's life over the next few years will be memory-enhanced cartridges, which most of the game manufacturers are now developing for release. The first of these to hit the market will be CBS Games' Wings *and* Tunnel Runner. *Thus, we asked Lou Abbagnaro to discuss the engineering of the 2600 unit itself and the role memory-boost chips will play in it.*

Lou Abbagnaro, director of engineering, CBS Games: Recently I read an article in *Spectrum* magazine written by the designers of the Atari 2600.

Interestingly, in structuring the machine, there were two or three areas in the design into which they just happened to add a feature; they weren't even sure how they were going to use them. A couple of these features gave them the programming flexibility that allowed the machine to last in the marketplace. Without them, the 2600



***CBS' RAM Plus chip games* Tunnel Runner *(top) and* Wings.**

would have been dead in a couple of years. These features included: being able to program each line of the TV picture, instead of every other line, to get better graphics. They also threw in one or two sounds they didn't think they were going to need when they found they had space left on their sound chip. That created a variance of sounds that could be generated and which have been used pretty extensively since then.

In designing, one of the major limitations that they admit to — and it would have cost them alot more to get around it — was the fact that they limited the amount of internal memory that you could address in the cartridge. Realize that no games at that time used more than 1K of memory.

So, the major limitation in improving the system from our standpoint was that there wasn't enough memory to work with. The processor wasn't the problem. It was a little more cumbersome than some others but it could still do the job. The processor is a 6507, a variant of the 6502 which is the most common. The 6507 doesn't have as many pins and has fewer address lines. The 2600 has twelve address lines, which allows 4K memory.

In order to get more graphics up there on the screen, you need two kinds of memory because each behaves differently. You need more cartridge memory, the ROM; that's where you store data so that the processor can get at it.

Once you've started drawing the picture, it takes almost the full attention of the processor. The more of the picture you can pre-store in local memory, in RAM memory, the more graphics you can display and the more those graphics can change from one frame to another, each frame taking one sixtieth of a second. The added ROM sort of gets you halfway there, but without the additional RAM you don't complete the full picture of what you can do.

Our RAM Plus chip addresses that area. We added extra ROM space and RAM space onto a single chip. Specifically, we have three times the ROM and three times the RAM of a normal Atari chip. With the RAM Plus chip we're able to use the ROM and RAM combination to get better graphics, more animation. And with the added space on the ROM we've been able to expand on the gameplay. We can go into different scenarios.

Both *Wings* and *Tunnel Runner* are subjective games, or first person games. To do that, you need to provide for more graphics than you would normally. For example, in *Tunnel Runner,* you have a monster that may approach you or turn and walk away from you. So instead of a figure that, say, flies across the screen and maybe goes back the other way, flat, we had to show all four sides of this creature.

Secondly, each time that you go through a maze, the maze changes. Doorways move, the colors change. Alot of that information has to be prestored so that they can get up there in a hurry and that gameplay is smooth. That requires a lot of RAM.

If we can go to 12K, what is to stop other companies from going to 14 or 16K? Nothing, really, but somewhere down the line there is a point of diminishing returns. And there are two constraints. One is a cost constraint. Memory costs money. The second factor is that, even if you put in a lot more memory, eventually you're going to run into a basic space limitation and a timing limitation in the 2600 itself. There is still only a certain amount of time to do computations when the picture is not on the screen. If you store more data but you can't get the processor to throw it up on the screen, it's not worth much. I don't know what the magic number is. I think you can go a little beyond what we've done, but not much more than a factor of two and it still won't give you a significant improvement over what we've done.

ULTRAFRIENDLY

"People are sometimes petrified when they approach a computer," says Al Orosa, Vice President of Ultravision, "But everyone's familiar with the television. From there, it's one step after another until the unit becomes comfortable for the buyer to use."

The unit in question is Ultravision.

Ultravision, from the Miami-based company of the same name, is actually a television, a videogame unit, and a computer.

The eighty-four channel color television has a ten inch diagonal screen and input/output jacks to allow hook ups with a video recorder and camera.

The basic videogame component accepts only Ultravision's own line of cartridges. But the owner will have the option of purchasing two add-on modules separately, one that will allow him/her to play **Colecovision** games on Ultravision, and the other for games of the **Atari VCS** persuasion.

The unit comes complete with two sixteen position joysticks with top-mounted fire buttons.

The Ultravision computer contains 64K of memory, expandable to 128K. It uses Microsoft Basic with four other languages accessible. 512 characters are displayable and sixteen colors are possible.

The typewriter-style keyboard contains sixty keys, eight programmable keys, and upper and lower case alphabet set.

Optional disk drive requires either five and a quarter or eight inch floppy disks, both single side, double density.

The unit is compatible with **Applesoft** and **CP/M** software. "The purchaser is walking into a ready-made library," says Al Orosa. In addition to its own videogames, Ultravision will be releasing its own line of computer software. "Ultimately it will be the most software-compatible, the most versatile unit available," continues Orosa.

Weighing in at under ten pounds, the unit runs on AC or DC current. A car lighter adaptor cord is available so that the obsessed user can program in a car or on a boat.

Ultravision will be available in the summer, and will carry an $875 to $1,000 price.

"It is probably the most friendly unit on the market," says Al Orosa. "We envision it as a family-oriented unit."

Orosa embellished this last remark by pointing out that the user can play or program for hours without tying up the family television.

Perhaps they should have named it the Peacekeeper.

The Ultravision console, shown above with its videogame component and here with its computer keyboard.

WE'RE NUMBER ONE

Distributing television time in a busy household could be a major problem if the software in question is by Sierra On-Line.

Of that company's all-time bestselling game, *Wizard and Princess*, spokesman Doug van Aman had this to say: "Estimating conservatively, if you play that game one or two hours a night, it will take you a month to finish it."

No problem? Then try *Time Zone*, which covers six disk sides. Playing one or two hours per day, van Aman says that *Time Zone* will take the average player a year to complete.

"People will get tired of an arcade-type game," he continues. "Ours are more like reading a novel. We require the use of the mind, not just eye-hand coordination."

The company that is now called Sierra On-Line was founded by Ken and Roberta Williams in their Simi Valley, California home. They hit upon the idea of combining high-resolution graphics with detailed text to create complex adventure games.

Roberta wrote the story line and Ken, an experienced and esteemed programmer, realized the game, which they titled *Mystery House*.

The success of that game propelled their move to Coarsegold, California in the foothills of the Sierra Nevada mountains. Sierra On-Line was officially founded in May of 1980. Since that time, the company has grown to employ one hundred people. It is the largest and best-selling non-public software publisher in the industry.

"We set the standard in

the industry," boasts Doug van Aman. "In fact, 'Hi-Res adventure' is a trademark exclusive to us."

Besides *Mystery House,* other Hi-Res adventure games for the **Apple II** and **II+** include:

Cranston Manor. Find the sixteen treasures that the eccentric Mr. Cranston stole and then hid in this decayed and sprawling estate.

Wizard and Princess (also for the **Atari 400/800**). Rescue the fair maiden from an evil wizard's mountain-top keep.

The Dark Crystal. Based on the movie by Jim Henson. As Jen, return the shard to the Dark Crystal before the great conjunction.

Ulysses and the Golden Fleece (also for the Atari 400/800 and the **IBM PC**). This game was favorably reviewed in *Videogaming Illustrated's* December '82 issue. The object, naturally, is to find the golden fleece.

Time Zone. This game was reviewed, again favorably, in our February issue. The player employs a time machine to defend earth from an alien invasion.

In addition to their Hi-Res adventures, Sierra On-Line produces several other lines of software for the Atari, Apple, or IBM computers.

• Fantasy role-playing games. These include *Ultima I* and *Ultima II,* which are epic adventures in time and space against the evil Mondain and his mate.

• Arcade games. The latest releases in this line include an adaptation of Sega's *Frogger* and *Lunar Leeper.* Sierra has produced fourteen arcade games to date.

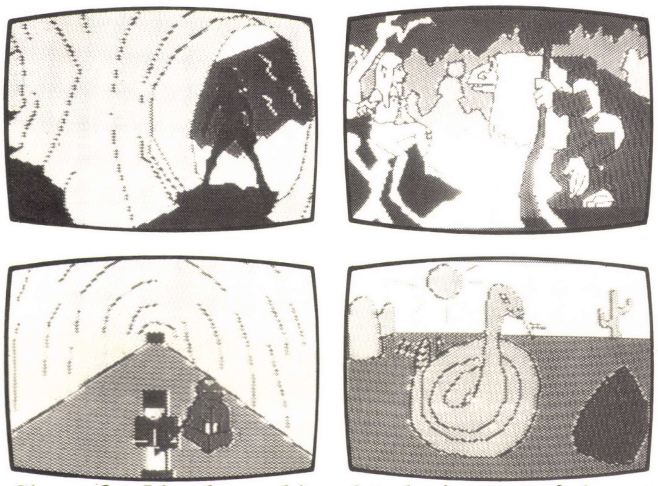
• Business. The bestselling *Screenwriter II* is probably the most famous of this line. It is an outstanding word processor for the Apple computers. Other programs include several data management systems, *The Artist* (a graphics program), *The Dic-Tio-Nary,* and the *Screenwriter Pro,* which combines the Screenwriter program with the dictionary program.

• Education. Sierra recently acquired the product line of Sunnyside Soft, who specialized in educational programs for children. But even before the merger, Sierra's commitment to this field was solid.

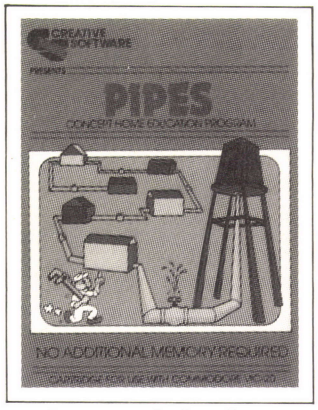
Doug van Aman confirms, "We have a team of educators who define skills that children need. We then take that information to our games experts who will design a game that will hold the child's interest and delight the child while he or she is learning."

Sierra's educational programs aimed at math, reading or writing skills include *Lunar Learning, Bop-A-Bet, Dragon's Keep,* and *Troll's Tale.*

As for the future of the software field and Sierra On-Line's place in it, Doug van Aman had this to say: "The graphics will continue to develop and improve as more creative people get involved in computers and programming. They're going to develop games that we can't even imagine now. And we'll be there when it happens."



***Sierra On-Line has achieved today's state of the art in graphics with* Dark Crystal, *and* Wizard&Princess.**



Spills & Fills ***and*** **Pipes** ***are only two of the Concept Home Education programs for the Vic20 personal computer. They're produced by Creative Software.***

WE'RE NUMBER ONE TOO

Also planning to be there when it happens is Creative Software, the number one independent publisher of software for the **Commodore Vic 20.**

Two soon-to-be-released games for the Vic 20 from Creative Software are:

Rat Hotel. The player is a rat who is desperately fleeing from Waldo, the janitor at the Hotel Paradisio. The rat must scurry from the top floor to safety in the basement boiler room, while Waldo pursues in his atomic elevator.

Moondust. Creative Software spokesman Elliott Dayhan is quite excited about this game. "It's a unique game," he says. "It's a non-maze maze game."

In *Moondust,* a friendly spacewalker is dropping trails of multi-colored moondust. The player controls a number of ships which scoop up the dust and then must drag the trails through the heart of glowing concentric circles in space.

"As you play the game," says Dayhan, "the computer generates music. The kind of music you hear depends on how you're playing. And it really is music, not just sounds."

The game was designed by Jaron Lanier, who is known for his abilities in music as well as graphic design.

Creative Software has announced nine new titles for the **Commodore 64.**

These titles include four home applicaton programs, and some games that were previously available for the Vic 20, including *Astroblitz* and *Trashman.* No details were available on a further title, *Save New York!*

HAL READ LIPS

Any computer can play games and many can speak, but can yours *see?* If you own an **Apple II, IBM-PC,** a **TRS-80, Commodore 64** or **Timex Sinclair,** it can.

Micron Technology of Boise, Idaho has introduced the MicronEye, which, when connected to a computer, transmits a visual image to the computer monitor. The image can be printed on an Epson graphics printer or saved on a diskette and recalled later, possibly for comparison purposes.

The major component in the camera is Micron's IS32 OpticRAM, which is a light-sensitive 64K dynamic RAM in a clear package. Included with the camera are the 16MM C-mount lens, tripod, six foot telephone cord (camera to computer), serial interface card, floppy disc with basic software routines and an instruction manual.

The cost of the MicronEye is $485, but buyers should beware that there are a string of components available which may have to be purchased separately for special effects and other particular uses.

The information created by the OpticRAM is digital and reads only black and white. Methods exist for the MicronEye to read shades of gray, but the furnished software does not include this option.

Applications of the MicronEye include text recognition, digitizing maps and scaled drawings, fingerprint analysis and classification, signature verification, gauge monitoring, home and industrial security, hardcopy printing, assembly line monitoring and robotics.

Open the pod bay doors, Hal.

THINK SMALL

Users looking for a portable computer will want to keep their eyes peeled for the TRS-80 Model 100 from Radio Shack.

Measuring two by twelve by eight and a half inches, the Model 100 weighs four pounds. It features a full-size typewriter keyboard, an imbedded ten key pad, four cursor directional keys, four command keys, and eight functional keys which are programmable in BASIC.

Contained in 32K of ROM are five programs, which include the BASIC microcomputer, a text editor, a note and filing system, an address organizer and, uniquely, a telecommunications package, which will automatically dial the telephone and send and receive information from an office computer or other data base.

The unit is powered by four "AA" batteries, which lend approximately twenty hours of operation. An AC adaptor is optional. Built-in nickel cadmium batteries maintain the computer's memory for up to thirty days even with the power turned off.

The Model 100 with 8K RAM is eight hundred dollars while the 24K RAM version is a thousand dollars. RAM expansion modules are available.

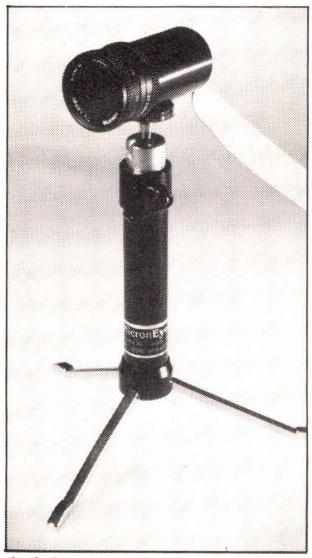
RAM EXPANSION GONE MAD

Mosaic Electronics of Oregon City, Oregon has announced its second release in the RAM Select series, which will give **Atari 400s** and **800s** much to ponder.

Called the Mosaic 64K RAM Select, the board will plug directly into either Atari computer. Atari 800 owners can plug up to three Select boards into their computer for 196,608 bytes of usable RAM. The Mosaic 64K RAM Select is totally bus compatible for use with Atari 16K and/or Mosaic 32K RAM boards.

Atari 800 owners can use the board to simulate the Atari 1200 architecture or configure the boards for super powerful bank selection. The 64K Select is compatible with both 8K and 16K ROM cartridges and installs without solder. Used with the Mosaic Adapter, 48K Atari 800 owners will have 112K RAM.

Owners can become members of the "Select" club, which offers a newsletter.



1.4 lens and close-up ring ensure versatility of use.

At top of page, Radio Shack's TRS-80 Model 100. Above, Mosaic Electronics' RAM Select Series for Atari.

DO THE RUSSIANS KNOW ABOUT THIS?

Players who are feeling a quasi-religious exaltation from videogame play can now turn and face Ottumwa.

On March 19, Ottumwa, Iowa was named "Videogame Capital of the World" by Iowa Governor Terry Branstad, the Amusement Game Manufacturer's Association and Atari, Inc.

Formerly best known as the home town of Radar O'Reilly in M*A*S*H, Ottumwa received this honor because it hosts the Twin Galaxies Arcade, where ABC's *That's Incredible* filmed a national Video Olympics competition.

In the Twin Galaxies Arcade is an entire wall of monitors. This is the International Video Scoreboard, which keeps track of the high score reports from all over the nation. Players are invited to call the arcade to check the high score on their favorite game. The arcade is on Main Street, naturally.

NOWHERE TO HIDE

First a capital and now an educational coin-op game? Can it be that respectability is creeping into the realm of the arcade? And can arcades survive the onslaught?

Exidy is billing *Hardhat* as the first educational arcade game. *Hardhat* is said to challenge the player's organizational skills, logic, ability to plan ahead and to be flexible under changing conditions, as well as decision making acumen and mental and physical agility.

It looks like it might be fun too.

In *Hardhat,* a carpenter is being chased by whirlwinds and hammers through a grid of scaffolding. In his wake, support timbers tumble. When all the timbers on any one side of the screen are eliminated, the structure collapses (the screen scrolls).

When the playfield scrolls, single letters randomly enter the perimeter. The hardhat must move these letters to the center of the screen by pushing the letter or scrolling the screen. When all the letters are in place, a new game with a longer word begins. **Hardhat** ***is a conversion kit, not an all-new game.***

PAGING LAWRENCE WELK

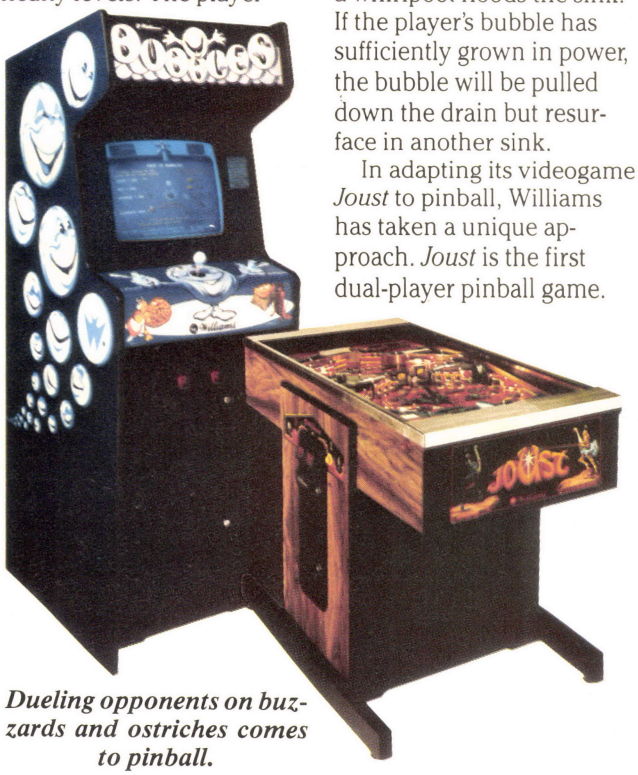
We've examined carpentry. Now let's move on to the plumbing.

Williams Electronics is releasing two new games to the nation's arcades, one of which is a stirring drama that takes place in a very crowded kitchen sink.

Bubbles boasts nine difficulty levels. The player controls a bubble which is rushing to and fro cleaning a sink of grease, crumbs and ants. The bubble is pursued by interfering sponges, brushes, cleaning ladies on brooms, insects, and bubble-bursting razor blades.

When the sink is cleaned, a whirlpool floods the sink. If the player's bubble has sufficiently grown in power, the bubble will be pulled down the drain but resurface in another sink.

In adapting its videogame *Joust* to pinball, Williams has taken a unique approach. *Joust* is the first dual-player pinball game.



Dueling opponents on buzzards and ostriches comes to pinball.

"Two players can take each other on in direct head-to-head competition, or one person can control both sets of flippers and playfields," says Williams spokesman Ron Crouse.

Other games currently in release or soon to be seen in your local arcade are:

Black Widow, from Atari. A shooting game.

Munchmobile, from Centuri. A cartoon driving game.

Mad Planet, from Gottlieb. A space game.

Super Orbit, also from Gottlieb. A pinball game.

Chexx, from I.C.E. A hockey game.

And lastly, from Taito: *Pirate Pete* and *Space Dungeon.*

WE WANT CHEETAH

Players will no doubt see many of the above games at the World's Largest Arcade and Video Circus which opens in Boston on June 3, prior to a forty city tour.

The exposition, featuring the equivalent of as many as four acres of games, is divided into three events:

The World's Largest Arcade will hold as many as two thousand arcade machines, all set on free play with a limit of ten minutes.

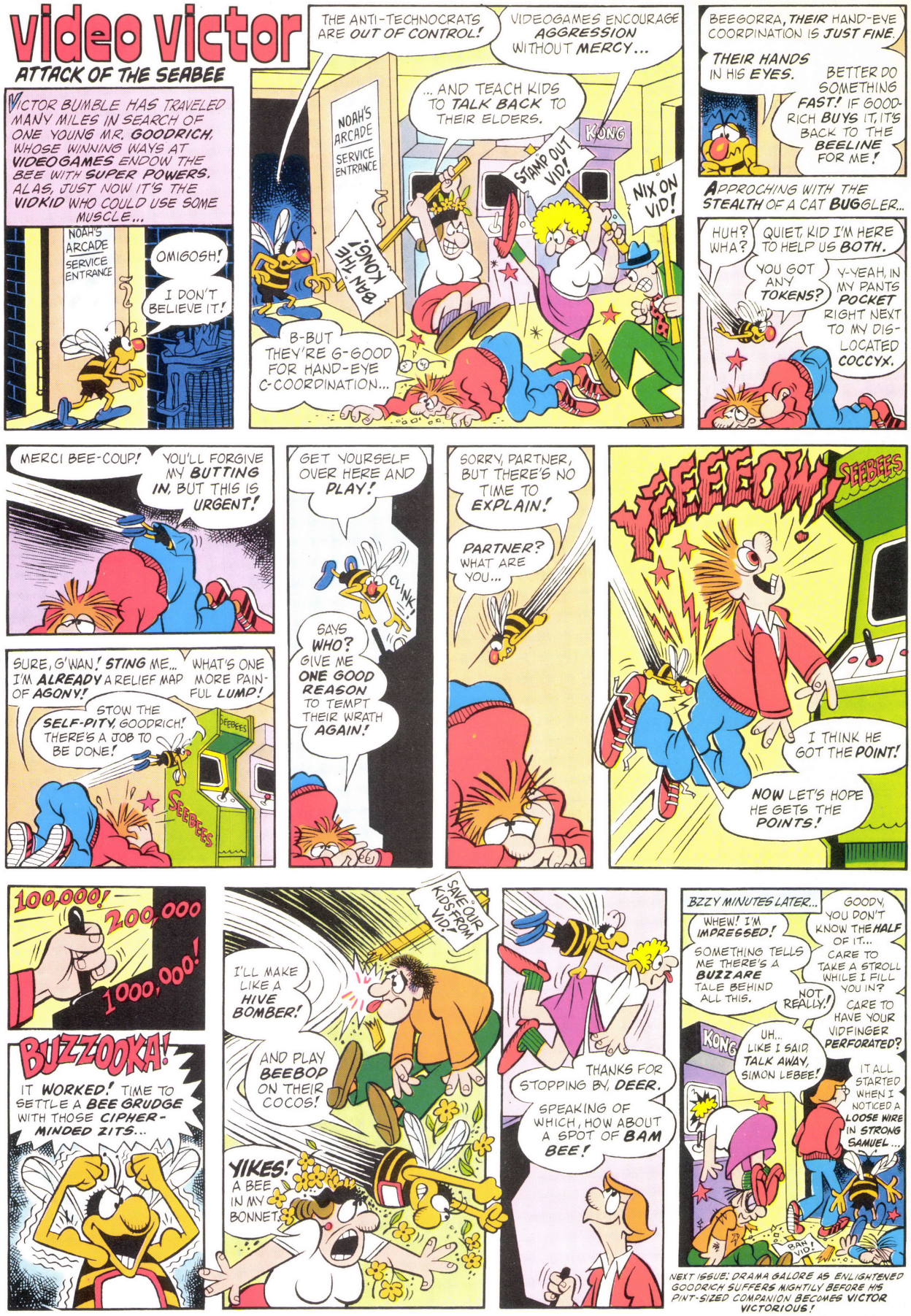
The Video Circus is a three-ring circus featuring the scoreboard from Ottumwa's Twin Galaxies Arcade; current high scorers exhibiting their skills; and a floor show featuring chimpanzees challenging audience members to rounds of *Pac-Man.*

The Grand National Championships will host the best players from participating arcades in furious competition for cash prizes.

A combination ticket for twelve dollars will admit the holder to all three events.

video victor

ATTACK OF THE SEABEE



NEXT ISSUE: DRAMA GALORE AS ENLIGHTENED GOODRICH SUFFERS MIGHTILY BEFORE HIS PINT-SIZED COMPANION BECOMES VICTOR VICTORIOUS!

Script: Jeff Rovin/Art: Gill Fox

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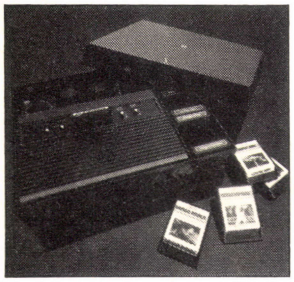

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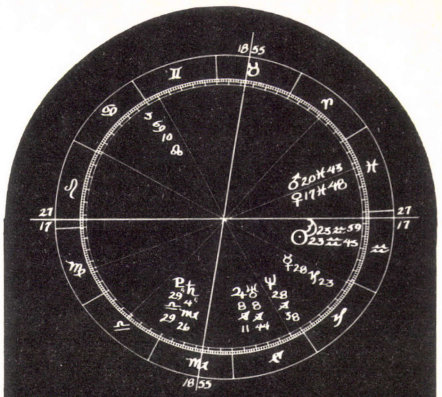

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you Read it Here First

Some years ago, television presented a movie that was based on a Coca-Cola commercial starring Mean Joe Green.

If a movie can be inspired by a TV commercial, why couldn't a videogame be spun off in a similar fashion?

There are a myriad of reasons why that will probably never happen, not the least of which is the very nature of the medium: clients would not want their products identified with the chaos, mischance and wholesale destruction that is an integral part of most successful games.

Since it will never happen, it was up to us to *make* it happen. We have fashioned three nonexistent game designs suggested by advertising slogans. We present them for your scrutiny.

Be All That You Can Be

You are a flabby and naive draftee who's never been further from home than the VFW Hall. Can you become a taut-muscled, keen-eyed, razor-honed tool of democracy?

See if you're up to the ultimate test in round six by conquering the first five boot camp rounds. Gamers with voice module attachments will hear "The Sarge" bawling at them.

Obstacle Course. Barriers, barbed wire, fetid pools and spurts of ammo scroll from the top of the screen.

Parachute Drop. A p.o.v. screen. You've been pushed from a plane and you must guide your chute through treacherous crosswinds to hit a small target field within an encircling mine field. Game is over if you hit a mine or leap into the propeller.

Mine Field. Now pick your way across the mine field. The sluggish joystick response is deliberate: you're carrying your buddy on your back.

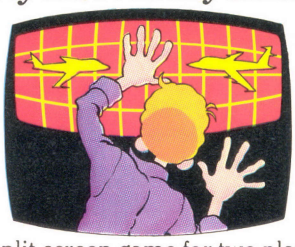
KP. Using your joystick to guide a simulated toothbrush, you must swab the barracks.

Weekend Pass. A timed maze round. Find your buddies in the Red Light District while avoiding the M.P.s. You must stop in at least twenty bars or be returned to the KP round.

Anti-Terrorist. This final round is optional. Heavily armed terrorists, hiding in a burnt-out building, are threatening to detonate a nuclear device. Negotiations have proved fruitless. The terrorists' demands have not been met. Zero hour is at hand.

In a *Berzerk*-style screen, you must rush the building and kill all the terrorists before they can reach the device. If even one touches the device, a special chip in the *Be All That You Can Be* cartridge burns out your picture tube!

Fly the Friendly Skies



A split-screen game for two players, *Friendly Skies* really brings people together.

Under the punishment of the worst blizzard in a hundred years, all the airports on the northeastern seaboard have been closed except one. Only two runways are still open. Commercial and private planes are in holding patterns in a hundred mile circumference around that airport. The object of this game is clear: get those planes down safely!

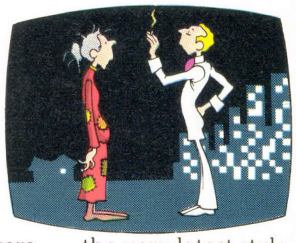
Player one is the air traffic controller. His/her radar screen is aswarm with planes of all sizes and colors: the size of the plane's image tells him/her the size of the plane, the color reveals the altitude, and the frequency of a graphic pulse indicates how much fuel the plane has remaining.

With joystick and firebutton, player one controls the altitude and heading of all the planes ... all the planes except the one with the least fuel.

Player two is the pilot of the plane with low fuel. Because the snowstorm allows no visual references, the player must fly on instruments — a bewildering array of them in the screen's lower half. Seven different cockpit panels are possible, and the logistics of plane weight and wind shear are constantly variable.

Player one must assist player two to land while making certain that the runway is clear and that the nineteen other planes are not on a collision course. Player two must relate his readings while trying to listen for instructions. Great for parties, this game induces panic and misunderstanding whenever it is played.

We've Got the Look



This game has two settings, one for men, one for women.

Mr. or Mrs. Couture appears inset in the screen wearing the very latest style. You must match, as closely as possible, the style, the flair, the *'je ne sais quoi'* of their clothes before the fashions change in order to win money and have your name entered in the social register.

The screen scrolls horizontally to reveal the windows of an array of stores, shops and boutiques. You begin the game with very little money, but it is possible to match the Coutures with funky *panache.* Start at flea markets and chain department stores. Use your joystick and press your firebutton to make your selection. A raspberry sound and animated haughty storeclerk frowns will greet you if you cannot afford your selection.

If you can keep up with the Coutures, you will catch the eye of the martini-for-lunch bunch. Insider business deals and lucrative love matches will help you accumulate money. You will be able to shop easily at the finest boutiques.

As the game pace quickens, you attend Paris fashion shows. You remain immobile as emaciated models prance by with potential selections. But there is an added difficulty: you must try to emulate the contemptuous sneer and vacant eye-glaze of the perpetually chic. If you can do this, you're keeping up with the Coutures.

To win the game, however, you must anticipate the Coutures, not merely follow them. Use your money and newfound *caché* to shop faster and lead the way. But if the computer finds you out of style at this game level, you are humiliated and you lose all your money. You end the game in polyester.

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ODYSSEY

No purchase necessary. Void where prohibited by law. Entries must be submitted no later than 6/30/83. See your dealer for contest details or send a self-addressed, stamped envelope to: ODYSSEY Home Arcade, P.O. Box 6950, Knoxville, TN 37914. Winners list available after 8/1/83.

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